WEST VIRGINIA UNIVERSITY

FIFTY-FIFTH YEAR

CATALOGUE AND ANNOUNCEMENTS

1921 . . 1922

MORGANTOWN, WEST VIRGINIA
PUBLISHED BY THE UNIVERSITY

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CALENDAR FOR 1922-23

1922

JANUARY

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1923

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UNIVERSITY CALENDAR

1922

June 4, Sunday ..... Baccaleaureate Sermon

June 5, Monday ..... Graduation Exercises

June 12, Monday ..... Summer School Begins

August 26, Saturday ..... Summer School Ends

September 18, Monday ..... First Semester Begins

September 18, 19, 20, Monday, Tuesday and Wednesday, Matriculation and Registration of Students

September 21, Thursday.....First Recitations of First Semester

November 22, Wednesday.....Day of Mid-Semester Reports

November 30, Thursday, to December 3, Sunday, inclusive, Thanksgiving Recess

December 4, Monday ..... Recitations Resume

December 5, Tuesday, Twelfth Anniversary Meeting of the Phi Beta Kappa Society

December 21, Thursday, to January 3, 1923, Wednesday, inclusive Christmas Holiday Recess

1923

January 27, Saturday.....Last Recitation of First Semester

January 27, Saturday, to February 2, Friday, inclusive Final Examinations of First Semester

February 6, Tuesday.....Second Semester Begins

February 6, 7, Tuesday and Wednesday——Registration of Students

February 8, Thursday.....First Recitations of Second Semester

April 6, Friday.....Day of Mid-Semester Reports

May 30, Wednesday.....Memorial Day, a holiday

June 1, Friday.....Last Recitations of Second Semester

June 2, Saturday, to June 9, Saturday, inclusive Final Examinations of Second Semester

June 3, Sunday ..... Baccalaureate Sermon

June 4, Monday ..... Graduation Exercises

West Virginia University

Morgantown

ESTABLISHED FEBRUARY 7, 1867.

THE STATE BOARD OF CONTROL.

403 CAPITOL STREET

CHARLESTON, WEST VIRGINIA

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JOHN SHERMAN DARST.....Charleston, W. Va.

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The College of Agriculture

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The College of Law

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The School of Medicine

JOHN NATHAN SIMPSON, M.D., Dean

The School of Music

LOUIS BLACK, Director

The Summer School

WAITMAN BARBE, Litt.D., Director

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THE UNIVERSITY FACULTY

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ALBERT MOORE REESE, PH.D., *Professor of Zoology*

OLIVER PERRY CHITWOOD,[3] PH.D., *Professor of History.*

---

1 Died, October 25, 1921.
2 Died October 6, 1921.
3 On leave of absence, first semester, 1921-2.

JAMES RUSSELL TROTTER, PH.D., LL.B., *Professor of Law*

† CHAUNCEY WILLIAM WAGGONER, PH.D., *Professor of Physics*

LOUIS BLACK, *Head of the Department of Vocal Music*

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HARLAN LESLIE MUMMA, *Captain, United States Army, Professor of Military Science and Tactics and Commandant of Cadets*

† Died October 24, 1922.

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EDMUND DANIEL McGARRY, A.B., M.B.A., *Assistant Professor of Economics*

DONALD J. MYERS, CAPTAIN, U. S. INFANTRY, (D.O.L.) *Assistant Professor of Military Science and Tactics*

INSTRUCTORS.

SUSAN MAXWELL MOORE, A.B., *Instructor in Piano*

GRACE MARTIN SNEE, B.M., *Instructor in Piano and Pipe Organ*

RUFUS ASA WEST, *Instructor in Metalworking*

FLORA RAY HAYES, A.B., *Instructor in Theory and History of Music*

RAYMER EGBERT SEAMAN, *Instructor in Woodworking and Foundry Practice*

PAUL CHARLES ROUZER, B.S.AGR., *Instructor in Agricultural Education*

MAX DONNER, *Instructor in Violin*

EDGAR WILLIAMS, A.M., *Instructor in English*

HARRY EDWARD GRAY, *Instructor in Mining (Extension)*

CLARA LYTLE, A.B., *Instructor in English*

ELIZABETH DEE FROST, A.M., *Instructor in English*

MARJA BROWN STEADMAN, A.B., *Instructor in Public Speaking*

EVA FLING ROUSH, A.M., *Instructor in Botany*

HAROLD MALCOLM CATHER, B.S.M.E., *Instructor in Drawing and Machine Design*

CHARLES KEPLER BROWN, *Instructor in Mining (Extension)*

ARTHUR TAYLOR BRAGONIER, B.S.C.E., *Instructor in Surveying*

WILLIAM JOHN CARL, *Instructor in Foundry Practice*

ERNEST ANGELO, B.S.AGR., *Instructor in Horticulture*

CHARLES VINYARD WILSON, B.S.AGR., *Instructor in Animal Husbandry*

JOSEPH LESTER HAYMAN, PH.C., B.S., *Instructor in Pharmacy*

CHARLES McCHESNEY BRAY, M.D., *Instructor in Practical Physical Diagnosis*

FRANCES MARGARET YOUNG, B.S., *Instructor in Home Economics*

CLAIRE FISHER, A.M., *Instructor in Mathematics*

ALLEN GUY MONTGOMERY, A.B., *Instructor in Mathematics*

HELEN PURINTON PETTIGREW, A.M., *Instructor in English*

GERTRUDE MARTIN, A.B., *Instructor in German*

MARIAN TORREY, A.M., *Instructor in Mathematics*

NELLIE PERRELL AMMONS, A.B., *Instructor in Botany*

MORRIS ABEL RAINES, A.M., *Instructor in Botany*

MENDOR THOMAS BRUNETTI, A.M., *Instructor in French*

ADAM CRAWFORD, *Instructor in Mining (Extension)*

WILLIAMS NORRIS, JR., *Instructor in Mining (Extension)*

FRANK C. BROOKS, *Instructor in Drawing and Machine Design*

WILLIAM OLIVER GNAGEY, *Instructor in Machine Shop Practice*

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MARY ALICE MILNER, B.S.H.E., *Instructor in Home Economics*

ROY EZEKIEL NELSON, B.S.C.E., *Instructor in Surveying*

---

1 Resigned, October, 1921.

CHARLES LESTER LAZZELL, A.B., *Instructor in Chemistry*

CHARLES ELMER LAWALL, E.M., *Instructor in Mining Engineering*

FERRIS DEWEY CORNELL, JR., B.S., *Instructor in Farm Engineering*

KARL SPANGLER QUISENBERRY, B.S.AGR., *Instructor in Agronomy*

MARGARET JANE CHAMBERS, B.S., *Instructor in Home Economics*

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ELMER LIONEL HAMMOND, PH.C., B.S. PHARM., *Instructor in Pharmacy*

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JUNIUS CAMPBELL EARLY.,[1] C.E., *Instructor in Mechanics*

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HOY JAY WALLS, B.S.E.E., *Instructor in Electrical Engineering*

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FRED CHARLES KLASS, *Instructor in Mining (Extension)*

EVANS ENGLE CRISWELL, *Instructor in Mining (Extension)*

LOUIS C. HUTSON, *Instructor in Mining (Extension)*

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JAMES B. BENSON, *Instructor in Mining (Extension)*

H. UBALD FOREST, PH.D., *Instructor in French and Spanish*

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JOHN ANDREW WITHROW, A.B., INSTRUCTOR IN ENGLISH

ASSISTANTS.

WALTER ALEXANDER MESTREZAT, *Assistont in Music*

ARCHIE FREELAND ARNOLD, *Assistant in Woodworking*

GREEK SAYRE, A.B., *Assistant in History and English*

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CLAYTON LAWRENCE BEERS, PH.C., *Assistant in Pharmacology*

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WILLIAM BROWN SHIREY, A.B., *Assistant in Chemistry*

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PAUL RUSSELL CUTRIGHT, A.B., *Assistant in Entomology*

PARRY MASON SCOTT, B.S., *Assistant in Bacteriology and Pathology*

RAY HUNTER WHARTON, B.S., *Assistant in Anatomy and Histology*

RAY IRA FRAME, B.S., *Assistant in Physiology and Physiological Chemistry*

JOHN JARRETT KNIGHT, B.S.M.E., *Assistant in Mechanical Drawing*

ALVIN MARTIN MILLER, B.S.M.E., *Assistant in Steam and Experimental Engineering*

LUCY BELTZHOOVER DILLE, *Assistant in Vocal Music*

HARRY C. MYERS, SERGEANT U. S. INFANTRY (D.E.M.L.) *Assistant to the Professor of Miltary Science and Tactics*

FRANK SIMA, STAFF SERGEANT, U. S. INFANTRY, *Assistant to the Professor of Military Science and Tactics*

STUDENT ASSISTANTS.

ARTHUR THOMAS HOPWOOD, *Student Assistant in Zoology*

JOHN ADDAIR, *Student Assistant in Zoology*

ORMAN CRAWFORD CAMPBELL, *Student Assistant in Zoology*

PAUL JONES DAUGHENBAUGH, *Student Assistant in Chemistry*

HANNIBAL ALBERT DAVIS, *Student Assistant in Mathematics*

CLESS YELVING FORDYCE, *Student Assistant in Chemistry*

GEORGE WASHINGTON PROVE, *Student Assistant in Chemistry*

WILLIAM ERNEST ROBERTS, *Student Assistant in Chemistry*

CLARENCE FREDERICK SCHROEDER, *Student Assistant in Zoology*

WALTER CLINTON SCHNOPP, *Student Assistant in Agricultural Journalism*

HARVEY CLAUDE GOFF, *Student Assistant in Agricultural Journalism*

BRYAN LEWELLYN WADE, *Student Assistant in Agronomy*

ALMA UNDERWOOD MARTIN, *Student Assistant in Music*

FRANCES HILEMAN, *Student Assistant in Chemistry*

HARRY HILL, *Student Assistant in Physics.*

THE WEST VIRGINIA AGRICULTURAL EXPERIMENT STATION STAFF.

HENRY GRANGER KNIGHT, PH.D., *Chemist and Director of Experimental Work*

BERT HOLMES HITE,[1] M.S., *Chemist*

NATHAN JAMES GIDDINGS, PH.D., *Plant Pathologist*

WILLIAM EARL RUMSEY, B.S.AGR., *State Entomologist*

HORACE ATWOOD, M.S., AGR., *Poultryman*

LEONARD MARION PEAIRS, B.S.AGR., *Research Entomologist*

CHARLES AUGUSTUS LUEDER, D.VM., *Veterinarian*

ANDREW JACKSON DADISMAN, M.S., AGR., *Farm Economics*

ERNEST LEE ANTHONY, M.S., *Dairyman*

FRANK BATSON KUNST, A.B., *Chemist in Charge*

MAXWELL JAY DORSEY, PH.D., *Horticultrist*

HARLEY LUCIUS CRANE, B.S.AGR., *Associate Horticulturist*

HARRY EDWARD KNOWLTON, B.S., *Associate Horticulturist*

RALPH JOHN GARBER, B.S., *Associate Chemist*

EUGENE PEYTON DEATRICK, PH.D., *Associate Soil Technologist*

EDGAR LEWIS ANDREWS, B.S.AGR., *Assistant Poultryman*

LUTHER FRANCIS SUTTON, B.S.AGR., *Assistant Horticulturist and Superintendent of Reymann Memorial Experiment Farm*

ANTHONY BERG, B.S., *Assistant Plant Pathologist*

CHARLES EDWARD WEAKLEY, JR., *Assistant Chemist*

CHARLES ELLSWORTH STOCKDALE, B.S.AGR., *Agricultural Editor*

ROSS HOMAN TUCKWILLER, B.S.AGR., *Assistant in Animal Husbandry*

THEODORE CLINTON McILVANE, B.S.AGR., *Assistant Agronomist, in Charge of Sub-Station at Maggie, W. Va.*

ROWLAND HARRISON PATCH,[1] M.S., *Assistant Horticulturist*

CHARLES VINYARD WILSON, B.S.AGR., *Assistant in Animal Husbandry*

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1 Resigned, February 1, 1922.

ERNEST ANGELO, B.S., *Assistant Horticulturist*

THOMAS JOSEPH COCHRAN, E.B.S., *Assistant Chemist*

BENJAMIN BERNARD KAPLAN, A.B., *Assistant Chemist*

THEODRIC BRYANT LEITH, A.B., *Assistant Chemist*

EVERETT CHARLES SHERWOOD, M.S., *Assistant Plant Pathologist*

THEODORE EDWARD ODLAND, M.S., *Assistant Agronomist*

JAMES HARVEY SHAFER, B.S.AGR., *Assistant Farm Economist*

ROBERT ROSEBERRY JAMISON, B.S.AGR., *Assistant Agronomist*

ROBERT ROSEBERRY JAMISON, B.S.AGR., *Assistant Horticulturist*

KARL SPANGLER QUISENBERRY, B.S.AGR., *Assistant Agronomist*

HAROLD JAMES BARRETT, M.S., *Assistant in Soils*

AGRICULTURAL EXTENSION STAFF.

NAT TERRY FRAME, A.B., *Director in Charge of Rural Organizations*

WILLIAM HENRY KENDRICK, B.S., *Assistant Director in Charge of Boys' Club Work*

HUGH SWISHER VANDERVORT, B.S., *Assistant Director in Charge of Agronomy, Horticulture, and Dairy Extension*

BENTON BONNER EZELL, B.S., *Assistant Director in Charge of Livestock Extension*

CHARLES HENRY HARTLEY, B.S., *Assistant Director in Charge of Extension Schools, Exhibits, Etc.*

CHARLES ELLSWORTH STOCKDALE, B.S.AGR., *Agricultural Editor*

DAVID ROLLIN DODD, B.S.AGR., *Specalist in Agronomy*

HUGH WILLARD PRETTYMAN, B.S.AGR., *Superintendent of the Packing School*

DEE CRANE, *Extension Specialist in Potatoes*

ROSS BRADSHAW JOHNSTON, *Agricultural Publicity*

ENOS JOHNSON PERRY, B.S., *Specialist in Dairying*

BENJAMIN FRANKLIN CREECH, B.S.AGR., *Specialist in Beef Cattle and Hogs*

EDWARD LEE SHAW, B.S.AGR., *Specialist in Sheep*

RALPH L. MASON, *Specialist in Poultry*

FREDERICK FLETCHER SHAFER, C.E., *Drainage Engineer*

HAZEL HORSEFALL, B.S., *Assistant in Club Work*

FRANCES FOLSOM McGUIRE, A.M., *District Home Demonstrator Agent*

MARGARET FORD, B.S.H.E., *In Charge of Farm Women's Clubs*

THOMAS DAVIS GRAY, B.S., *Specialist in Horticulture*

EVERETT CHARLES SHERWOOD, M.S., *Specialist in Plant Pathology*

GEORGE JAY VAN DERVEER, B.S., *Assistant Poultry Specialist*

JEANNETTA WEIL, *Chief Clerk, in Charge of Clerks and Stenographers*

MARY CATHRYN MORELAND, B.S.AGR., *District Home Demonstration Agent*

LIBRARY STAFF.

LONNA DENNIS ARNETT, PH.S., *Librarian*

JENNIE DELAWDER BOUGHNER, A.B., *Assistant Librarian*

VIVIAN GORDON REYNOLDS, *Assistant Librarian*

ELIZABETH STEWART HOGE, *Assistant Librarian*

EVALYN HITE, *Assistant Librarian*

GLENN MORRIS NEY, *Student Assistant in the Library*

ZELMA MERCER, *Student Assistant in the Library*

JAMES EVERETT WILSON, *Student Assistant in the Library*

LOUIS ALAN McKEE, *Student Assistant in the Law Library*

LAMBERT McCHESNEY DOOLITTLE, *Student Assistant in the Law Library*

BENJAMIN GARNET REEDER, *Student Assistant in the Law Library*

OTHER OFFICERS.

BERTHA BROWNING PURINTON, A.M., *Assistant to the Dean of Women*

HARRY ADAM STANSBURY, B.S., *Director of Athletics*

CHANDLER LINN BROOKS, *Superintendent of Buildings and Grounds*

ELIZABETH B. ABBOTT, *Matron at the Women's Hall*

WILLIAM J. JONES, JR., B.S., *Director University Y. M. C. A.*

NELLE SUMMERS, A.B., *General Secretary University Y. W. C. A.*

SOPHIE W. BRUNHOFF, B.A., *Director of Physical Training for Women*

STANDING COMMITTEES.

Entrance: The President and deans of the three colleges admitting freshmen.

Classification and Grades: Professors HARE, TROTTER, GRUMBEIN, HILL and TRUSCOTT (Secretary).

Graduate Work: Dean CALLAHAN, Professors DEAHL, WAGGONER, DAVIS and COX (Secretary).

Public Exercises and Entertainments: Professors KAY and BLACK, Director Y. M. C. A., Director Y. W. C. A., President Student Council and R. B. JOHNSTON (Secretary).

Prizes: Professor VICKERS, Dean MADDEN and Professors HODGSON, CANNADAY and Associate Professor HARRIS.

Library: Dr. ARNETT, Professors ARMSTRONG, SIMPSON, HAYES, CLARK, BROWN, WINKLER and EIESLAND.

Women Students: Dean MOORE, Professor COLWELL, Assistant Professor POLLOCK, Mrs. PURINTON, Miss HAYES, and Miss BRUNHOFF.

University Publications: Professors JOHNSON, BARBE, CANNADAY, FORMAN, DICKINSON and Mr. STOCKDALE.

Student Publications: Professor STATHERS, CHITWOOD, R. L. MORRIS, CAVINS, and Assistant Professor REED.

Summer School: President TROTTER, Dean CALLAHAN and Professors BARBE, DEAHL and WINKLER.

Military and Gymnasium Board: Captain MUMMA, Dean SIMPSON and Drector STANSBURY.

Social Affairs: Professors DARBY and KAY, Dean MOORE, Captain MUMMA, Mrs. SNEE, Mrs. PURINTON and Miss BRUNHOFF.

Student and Fraternity Standing: Professors REESE, HODGSON and J. R. TROTTER.

Scientific Research: Professors WAGGONER, REESE, GIDDINGS, ARKIN and FORMAN.

Fraternities: Professor SMITH (Delta Tau Delta), Professor REESE (Beta Theta Pi), Mr. WILLIS (Phi Sigma Kappa), Professor HARDMAN (Sigma Nu), Dr. ARNETT (Sigma Chi), Professor TRUSCOTT (Phi Kappa Psi), Professor ARMSTRONG (Kappa Alpha), Assistant Professor GROW (Sigma Phi Epsilon), Associate Professor DADISMAN (Kappa Sigma), Mr. GLEN HUNTER (Phi Kappa Sigma), Professor COX (Theta Chi).

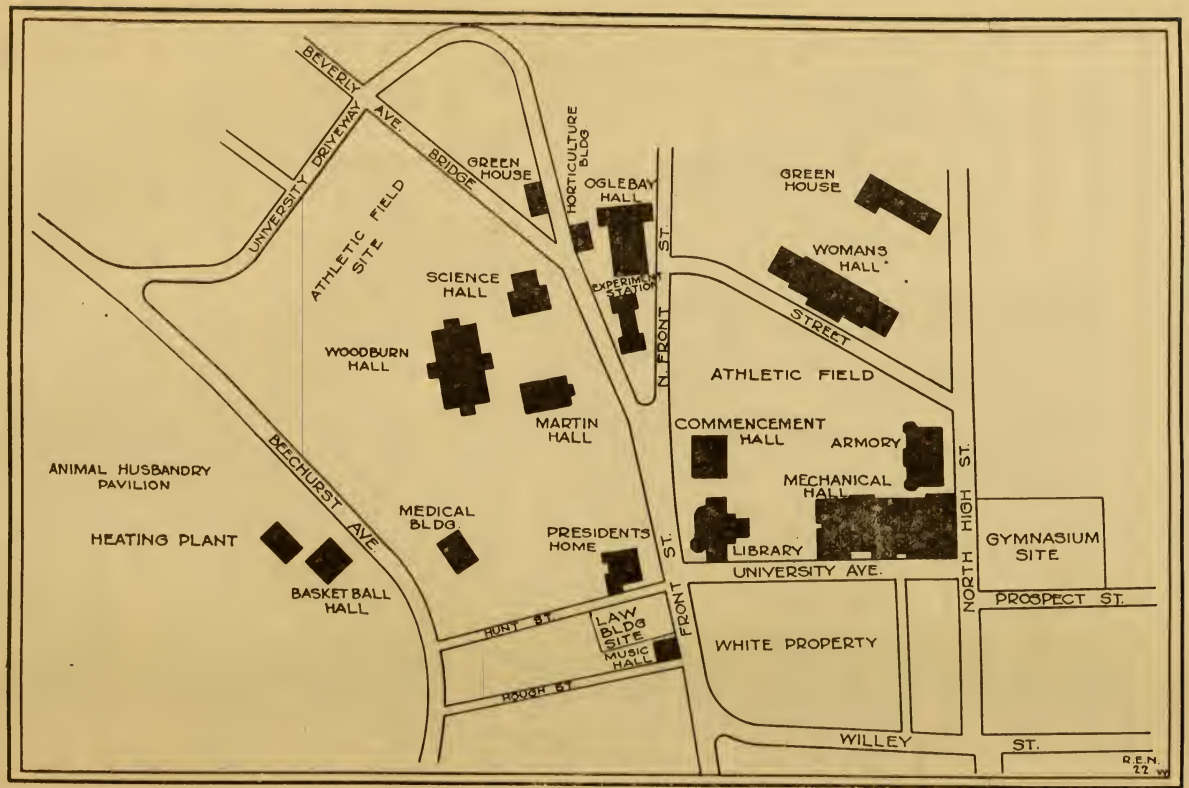
Sororities: Professor COLWELL (Alpha Xi Delta), Mrs. HITE (Kappa Kappa Gamma), Mrs. BARBE (Chi Omega) and Miss FROST (Pi Beta Phi).

THE ATHLETIC BOARD.

Faculty Members: Director STANSBURY (Ex-officio), Professor S. J. MORRIS and Mr. HARTLEY.

Alumni Members: GILBERT D. MILLER, Morgantown, W. Va. (Term expires June 30, 1923), JACKSON ARNOLD, Weston, W. Va. (Term expires, June 30, 1922).

Student Members: R. H. C. KAY, (Term expires June 30, 1922), R. C. Hawkins, (Term expires June 30, 1923).


BEVERLY AVE.
BRIDGE
GREEN HOUSE
HORTICULTURE BLDG
OGLEBAY HALL
UNIVERSITY DRIVEWAY
ATHLETIC FIELD SITE
SCIENCE HALL
EXPERIMENT STATION
N. FRONT ST.
GREEN HOUSE
WOMANS HALL
STREET
WOODBURN HALL
ATHLETIC FIELD
MARTIN HALL
COMMENCEMENT HALL
ARMORY
ANIMAL HUSBANDRY PAVILION
BEECHURST AVE.
MECHANICAL HALL
MEDICAL BLDG.
PRESIDENTS HOME
HEATING PLANT
ST.
LIBRARY
NORTH HIGH ST.
GYMNASIUM SITE
UNIVERSITY AVE.
PROSPECT ST.
BASKET BALL HALL
HUNT ST.
LAW BLDG SITE
FRONT
WHITE PROPERTY
MUSIC HALL
BOUGH ST.
WILLEY
ST.
R.E.N. 22 VV

THE UNIVERSITY

DESCRIPTION OF THE INSTITUTION.

LOCATION.

Morgantown, the seat of the University, is the county seat of Monongalia county. It is a beautiful town of twelve thousand inhabitants, located on the Monongahela river and on the Baltimore and Ohio Railroad, the Morgantown and Kingwood Railroad, and the Monongahela Railway, 103 miles east of Wheeling, and the same distance south of Pittsburgh.

The University grounds border the Monongahela river and afford a most picturesque outlook. The campus comprises about fifty acres. The University farms, a mile distant from the campus, contain in all almost seven hundred acres.

HISTORY.

West Virginia University originated from the national land grant act of June 2, 1862, and from the subsequent action of the state legislature in accepting and carrying out the provisions of the act. On January 9, 1866, the board of trustees of the Monongalia Academy at Morgantown tendered to the legislature for the use of the contemplated state or land grant college, all its property, including Woodburn Female Seminary, on condition that the college should be located at Morgantown. On January 30, 1867, the legislature accepted the property and on February 7 passed an act permanently establishing "The Agricultural College of West Virginia" and authorizing the governor to appoint eleven suitable persons as a board of visitors.

The eleven visitors held the first meeting on April 3, 1867, at which time they appointed Alexander Martin president and established collegiate, scientific and agricultural departments of instruction.

By an act of December 4, 1868, the name of the college was changed to "West Virginia University" and the "board of visitors" to the "board of regents." July 1, 1919, the "board of regents" was merged in "the state board of education."

The dates of the establishment of the special colleges and schools now comprised in the University are as follows: The College of Law, 1878; the College of Engineering, 1887; the Agricultural Experiment Station, 1888; the College of Agriculture, 1897; the School of Music, 1897; the School of Medicine, 1902.

The University has had nine regular presidents. Alexander Martin resigned in 1875. He was succeeded by John W. Scott (acting president), 1875-7; John Rhey Thompson, 1877-81; Daniel Boardman

Purinton (acting president), 1881-82; William L. Wilson, 1882-3; Robert C. Berkeley (chairman of the faculty), 1883-5; Eli Marsh Turner, 1885-93; Powell Benton Rynolds, (acting president), 1893-5; James L. Goodnight, 1895-7; Jerome Hall Raymond, 1897-01; Daniel Boardman Purinton, 1901-11; Thomas Edward Hodges, 1911-14; Frank Butler Trotter (acting president, 1914-1916), 1916.

GOVERNMENT AND ORGANIZATION.

The financial and business affairs of the university and of all the other state educational institutions are directed by a State Board of Control consisting of three members appointed by the governor. This board also exercises a general control over the various public institutions of the state. The academic control of the University (and also of the other educational institutions of the state, with the exception of the School for the Deaf, Dumb and Blind, The Boys' Reform School, and The Girls' Industrial School), is vested in The State Board of Education. The board is bi-partisan and consists of the state superintendent of free schools (ex officio), who is elected by the people, and of six other members who are appointed by the governor.

The internal administration of the University is vested in the President, The Council of Administration, and the University Faculty. All matters of a purely administrative or executive nature are in the hands of the President alone or of the President and Council. The Faculty is the general legislative body; it fixes the requirements for entrance and graduation and has immediate direction of the general educational policy of the institution. Any proposal to change this policy in any respect must be made in writing at a meeting of the Faculty.

Subordinate to the Faculty are a number of standing committees, appointed by the President. See page 18.

The University organization embraces:
The College of Arts and Sciences.
The College of Engineering and Mechanic Arts.
The College of Agriculture including the West Virginia Agricultural Experiment Station and the Division of Agricultural Extension.
The College of Law.
The School of Medicine.
The School of Music.
The Summer School.
The Division of Military Science and Tactics.

FUNDS.

The funds for maintaining the University are derived from the following sources: (1) Interest on the land grant endowment of $115,750; (2) the Morrill fund; (3) the Hatch fund; (4) the Adams fund; (5) the Smith-Hughes and the Smith-Lever funds; (6) biennial appropriations by the state legislature; (7) fees and tuition. The annual income of the University and Experiment Station from all sources is now approximately $1,250,000. Appropriations for buildings available during the current year amount to $575,000.

BUILDINGS.

There are now on the campus thirteen substantial brick and stone buildings. The administrative offices of the University are in Woodburn Hall. Oglebay Hall, occupied by the College of Agriculture, and Woman's Hall, the girls' dormitory, have recently been completed. Funds for a new gymnasium, to cost $300,000, and for new buildings for the College of Law, $225,000, and the department of chemistry, $500,000, have been appropriated by the state legislature and the erection of these buildings will begin soon.

THE UNIVERSITY LIBRARY.

The Library Building is a three-story stone structure, 135 feet long by 50 feet wide, with book room annex in the rear. The basement of the building is used for storage. On the first, or main floor, are the reading and reference rooms, rooms for the books on education and medicine, and the cataloguing rooms and the office of the librarian. On the upper floors are the librarian's office and rooms for government documents, for books on agriculture, engineering, and for class work.

The University Library consists of the General and Law Libraries. The General Library is located in the Library Building and numbers about 60,000 volumes. The Law Library, located in Woodburn Hall, numbers about 15,000 volumes. The library of the Agricultural Experiment Station is now shelved with and is a part of the General Library. Two hundred and seventy-five periodicals, including publications of societies, are received. Most of the county papers of the state are on file in the reading room.

All officers and students, and, under special restrictions, persons not connected with the University, have the privilege of drawing books from the library for home use, two volumes being allowed at one time. The corps of instruction have direct access to the shelves and students may have this privilege for special investigation upon recommendation of their instructors.

The Library is open from 7:45 a. m. to 10 p. m. every week day during the semester except Friday, when it is closed at 8 p. m. It is closed on Thanksgiving day, Christmas day, New Year's day and the Fourth of July. On Sundays the Library is open for readers from 2 to 5 p. m. No books may be borrowed on Sunday. During the Christmas and summer vacations it is open on week days from 8 to 12 a. m.

PHYSICAL LABORATORIES.

The department of physics occupies Martin Hall. The general lecture room is provided with water, gas, compressed air, electrical power, a special device for rapidly darkening the room, and a solid masonry pier for galvanometers, etc., requiring a non-vibratory support. The two general laboratories are large enough to accommodate forty students working at one time and are equipped with the view of accomplishing the maximum amount of laboratory work in the minimum time. The photometer room is equipped with a Reichanstalt-Summer-Brodhun photometer and a Hilger Constant Deviation Spectro-photometer. The electrical standardizing laboratory is equipped with three individual switchboards connecting with the main power board, a full line of D. C. and A. C. measuring instruments, six mounted galvanometers, a Leeds and Northrup Potentiometer with standard cells and resistances for D. C. calibration, a Siemens Dynamometer for A. C. calibration, Thompson, Koepsel, Ring and Epstein sets for iron testing, standard capacities and Wheatstone, Kelvin, and Cary-Foster Bridges for resistance measurements. The shop is supplied with a full line of bench tools for the manufacture and repair of apparatus, and has in addition a 9-in. lathe, a 9-in. drill press, a circular saw and emery wheels—all motor-driven.

Electrical power is supplied from a motor-generator set, the D. C. voltage being controlled by a Tirrill Regulator insuring steady voltage for laboratory work. The laboratory has in addition a 220-volt A. C. supply, and 50 volts from a storage battery. The distributing board is equipped with auto-transformers and special rheostats making it possible to distribute various kinds of power to each laboratory in the department. The department is also equipped with apparatus for advanced work in light, heat, and electrical oscillations.

Under Chapter 16, Acts of West Virginia, 1915, the director of the physical laboratory of the West Virginia University is Assistant Commissioner of Weights and Measures in the State of West Virginia. The physical laboratory is therefore the State Standardizing Laboratory for Weights and Measures and is provided with all the necessary standard weights, measures, balances and apparatus for carrying on this work.

CHEMICAL LABORATORIES.

The rooms assigned to the department of chemistry consist of four lecture and recitation rooms and eight laboratories. Connected with these are two weighing rooms and two preparation rooms. The laboratories afford working space for two hundred and fifty students at a time and are supplied with water, compressed air, gas, chemicals and apparatus necessary for practical work. This apparatus includes a large number of pieces used in illustrating the elementary principles of science, as well as the more expensive instruments used in analytical work. A collection of the latest reference and text books is kept within easy reach of the students.

In addition to the ordinary apparatus, combustion furnaces, gas and electric tube furnaces, a colorimeter, specific gravity apparatus, a Berthelot bomb calometer, a spectroscope, refractometer, etc., can be issued to the students from the stock room when their work demands them.

MUSEUM OF GEOLOGY AND PALEONTOLOGY.

The equipment for the purpose of illustrative teaching in geology, paleontology and mineralogy consist of many thousands of fossils, casts and models, a good collection of minerals, specimens of all the important building stones, and Ward's College Collection in Paleontology, showing the advancement from the early forms of life to those of the present time. Collections of rocks and fossils illustrating the geology of the state are being constantly gathered by the West Virginia Geological Survey and are placed in the keeping of the University, where they are available for study. The University is situated in the midst of a great coal mining region, within five miles of the westernmost fold of the Appalachian mountains, and oil and gas wells are but a short distance away. The natural facilities for the study of geology are unsurpassed.

THE ZOOLOGICAL LABORATORIES.

The laboratories devoted to the work of zoology and embryology occupy a part of the third floor of Wuudburn Hall. The plumbing and lighting of these rooms are arranged for the special purpose for which the rooms are used. The lecture rooms are supplied with projection lanterns and wall charts. The laboratories are equipped with high grade microscopes, microtomes, paraffine baths, incubator, and all other necessary apparatus for general class work. One room is fitted up as a shop and general preparation room. A part of this room has been partitioned off to form a dark-room. A large reducing and enlarging camera and a Bausch and Lomb micro-projection and photographic apparatus make all kinds of photographic work possible.

A type collection of animals is gradually being increased. For the work in embryology various series of Ziegler's wax models, embryos, whole and sectioned, dissections, charts, etc., are provided.

THE BOTANICAL LABORATORIES.

The botanical laboratories are in Oglebay Hall. They are equipped with microscopes, oil-immersion objectives, dissecting lenses, camera lucidas, microtomes, water baths, paraffine ovens, incubators, sterilizers, autoclave, and some apparatus for plant physiology, besides the usual reagents and glassware.

EDUCATIONAL AND PSYCHOLOGICAL LABORATORY.

The equipment for use in the laboratory work in connection with courses in education and educational psychology is found in rooms 15, 16, and 17, Woodburn Hall. This equipment includes sufficient apparatus for conducting classes in experimental education and in mental tests and measurements. In addition to the complete set of apparatus that accompanies Whipple's "Manual of Mental and Physical Tests," thre has been added recently several hundred dollars' worth of apparatus such as mirror-drawing and tracing devices, individual tachistoscopes, mirrors for observing eye-movements, perception cards, puzzles, etc. The laboratory is provided also with a very complete list of samples of 50 or more of the most desirable educational tests and scales, and with practically all of the intelligence tests that have been published. The department is gradually accumulating a number of charts, tables, and graphs of local conditions helpful in studying the educational problems of the state.

OTHER LABORATORIES.

A more detailed description of the various engineering and agricultural laboratories as well as the laboratories of the School of Medicine will be found in connection with the announcements of these departments on later pages of this catalogue.

MILITARY TRAINING.

Military training is prescribed for all regular male students in the University below the rank of junior unless such students are more than twenty-three years of age upon their entrance to the University. Certain exceptions to this requirement are stated in full in the detailed announcements of the Division of Military Science.

Enrollment in the Division of Military Science or appointments as a state cadet does not render the student liable for military service either to the State or to the United States government.

A unit of the Reserve Officers' Training Corps was established at the University in 1916. An Engineer Unit, Senior Division of the Reserve Officers' Training Corps was established in 1919 and is now in operation.

ATHLETICS.

The department of athletics, as now organized, is under the supervision of a director. Football, baseball, basketball, wrestling, track, cross-country and tennis teams are organized and trained each season. All University athletics are under the control of the athletic board. This board is composed of the director of athletics, two other members of the University faculty, two alumni of the University, and two students.

The faculty members of the board are appointed by the President of the University and serve during his pleasure. One faculty member is designated as chairman of the board. He is the executive officer of the board and has no vote except in case of a tie.

The alumni members are elected by the Alumni Association at their annual meeting at commencement for a term not exceeding two years. Not more than one alumni member shall be a resident of Monongalia County.

The student members of the board are elected by the student body by ballot. One member in full standing in the junior class, a candidate for a degree, is elected to serve two years at a poll held not later than June 1 of each year. All details of these elections are in the hands of the Inter-Class Council in consultation with the President of the University.

MEDICAL SERVICE.

All students in the University pay a medical fee of $2.50 each per semester, in return for which they receive free drug service from the department of pharmacy of the University, and free medical attention, including minor surgery (specialties excepted) from the faculty of the School of Medicine.

Students wishing to avail themselves of the dispensary will report at the dean's office in the Medical Building where a physician will be on duty from 10 to 12 a. m. and from 2 to 5 p. m. daily, and Saturday morning from 10 to 12. It is expected that students shall obtain these services at the dispensary, unless they are unable to leave their rooms, when a physician will attend them at their residences. Students unable to leave their rooms can obtain such services by telephoning to the Medical Building (No. 500) during office hours, or to the dean at his home (No. 244-J).

Summer School students and those coming in for only one class, or some special class, are exempted from the payment of the medical fee if they so desire.

UNIVERSITY FEES AND EXPENSES.

Class officers will issue class cards only on presentation of the receipt for the proper tuition and fees, signed by the registrar and the financial secretary.

Tuition and Fees.	Residents.[1]	Non-Residents.
College of Arts and Sciences	Free	$ 50.00
College of Engineering	Free	50.00
College of Agriculture	Free	50.00
College of Law	$ 25.00	50.00
School of Medicine	25.00	100.00
Summer School	10.00	15.00
Contingent fee	12.50	12.50
Student Activity fee	5.00	5.00
Medical fee	2.50	2.50
Registration fee[2]	2.00	2.00
Diploma fee[3]	10.00	10.00
Students' Record fee[4]	1.00	1.00

REFUNDING OF TUITION AND FEES.

Students who withdraw from the University for good and sufficient reasons during the first two weeks of the semester, will have their fees refunded upon making application to the President.

COST OF A YEAR'S WORK.

Board and lodging may be obtained in Morgantown for from $6.00 to $10.00 a week. Furnished rooms may be obtained at from $1.50 to $3.00 a week with two in a room. Board in private families or in students' boarding clubs costs from $5.00 to $7.00 a week. A student's washing will cost usually from $10.00 to $18.00 a year, his text books from $8.00 to $30.00 a year, and his college fees $40.00 a year. Traveling expenses, clothing, and miscellaneous expenses will depend largely upon the tastes and habits of the individual. In general it may be said that the legitimate cost of a nine months' term of residence at the University ranges from $300.00 to $500.00, exclusive of traveling expenses.

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[1]Students are considered to be resident students if at the time of their registration their parents or guardians have been residents and citizens of the State for at least one year. No non-resident student shall gain residence entitling him to reduction or exemption from tuition merely by his attendance at the University.—Order of the Board of Education.

[2]As a reward for prompt registration this fee is remitted to all students who procure class cards during the first three days of the first semester, and the first two days of the second semester. Students whose work is exclusively in music are excused from payment of the $2.00 registration fee.

[3]The diploma fee is payable by all students at the beginning of the semester in which they expect to receive their degree or diploma.

[4]This fee is charged for furnishing a copy of a student's record in the registrar's office after the regular semester reports have been issued.

ADMISSION TO THE UNIVERSITY.

METHODS OF ADMISSION.

Students are admitted to the University either by examination or on certificate from an accredited preparatory school. In the latter case the certificate must set forth the work of the student in detail. Diplomas or certificates of a general nature are not sufficient.

Candidates for admission to the University must be at least sixteen years of age. They must present certificates of good moral character and, if from other colleges or universities, must present letters of honorable dismissal.

Candidates for admission who do not present entrance certificates, or who come from other institutions of learning without letters of honorable dismissal, may, at the discretion of the registrar, be allowed to register provisionally. In every such case the registrar will make immediate inquiry of the institution from which the applicant comes and if satisfactory certificates of credits and good standing can not be obtained the registration will be cancelled and the fees paid by the applicant will be returned. A provisional registration will not ordinarily be continued for a longer period than one month.

ENTRANCE CREDITS.

The requirements for admission to the various colleges of the University are stated in terms of units.

A unit in any subject represents the amount of work that may be done in a standard high school in a year of thirty-six weeks, with five recitation periods of not less than forty minutes each, per week. In courses where laboratory work is required, from two to three hours of laboratory work is considered the equivalent of one hour of recitation, according to the amount of outside preparation required in connection with such work.

In accrediting West Virginia high schools the University follows the classification made by the state supervisor of high schools. Graduates of accredited schools receive credit for the work certified, with the understanding, however, that no student may enter any college of the University until he has credit for fifteen units, i. e., the work of a standard four-year high school course.

Graduates of the state normal schools and of all other schools in good standing will receive credit for work properly certified.

Certificates of entrance credits should be on the blank form prescribed by the University or on a similar form, so that credit values may be readily computed. These certificates should be sent in to the registrar at least two weeks before the applicant presents himself for matriculation. Failure to do this may result in vexatious delay in registration and may render the student liable to the payment of the

$2.00 registration fee. After the certificate has been considered by the Committee on Entrance and the credits recorded, it becomes the property of the University and is permanently filed in the rgistrar's office.

PRESCRIBED AND ELECTIVE UNITS.

A. The following groups are required:

(1) Four units of English.

(2) Three units in one other subject.

(3) Two units in a third subject.

(4) Two units in a fourth subject.

(5) Four units elective.

B. The work indicated in A must include: For admission to the College of Law: 2 units of Latin. For admission to the College of Engineering: 1½ units of algebra, 1 unit of plane geometry, and ½ unit of solid geometry. For admission to the School of Medicine: 2 units of Latin, 1 unit of history, 1 unit of algebra, and 1 unit of plane geometry.

C. Work in the following subjects not to exceed the number of units placed after each subject will be accepted:

English	4 units	Science[2]	
		Physics	1 unit
Foreign Languages[1]		Chemistry	1 unit
Latin	4 units	Biology	1 unit
Greek	3 units	Botany	1 unit
French	3 units	Geology	1 unit
German	3 units	Zoology	1 unit
Spanish	3 units	General science	1 unit
Italian	3 units	Physical geography	½ unit
		Physiology	½ unit
		Hygiene and sanitation	½ unit

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[1]Not less than two units of one foreign language will be accepted for entrance.

[2]A group of two units in science may be made by combining one unit each of physics and chemistry or one unit of any two of the following: biology, botany, zoology, geology. A group of three units in science may be made by combining one unit each of any three of the following: physics, chemistry, biology, botany, zoology, geology.

Mathematics		Commercial geography	½ unit
Algebra	1½ units	Commercial law	½ unit
Plane geometry	1 unit	Vocational subjects (not to exceed	
Solid geometry	½ unit	four units in all.)	
Trigonometry	½ unit	Agriculture	3 units
History and Economics		Household arts	3 units
History	3 units	Manual training	3 units
Civics and American history	1 unit	Bookkeeping or bookkeeping and commercial arithmetic	2 units
Economics and sociology	1 unit	Shorthand and typewriting	2 units
Education	2 units		
Drawing		Music[1] (applied)	2 units
Free-hand drawing	1 unit		
Mechanical drawing	1 unit		

[1]Credit for work in music is given only under the conditions stated on page 59.

CONDITIONAL ADMISSION.

Students who have credit for fifteen units of secondary school work but who can not meet the specific requirements (see (A) and (B) above) of the college they desire to enter may register as conditional freshmen in that college. Such students must make up all deficiencies before they can be classified as sophomores.

SPECIAL STUDENTS.

Persons who do not desire to become candidates for a degree, may, by permission of the Committee on Entrance and of the faculty or dean of the college which they wish to enter, be admitted as special students, subject to the following provisions:

1. Special students must as a rule be twenty-one years of age or over (twenty-two in the College of law).

2. Special students must satisfy at least nine units of the requirements for admission, including two units of English. (For academic requirements for admission as special students in the College of Law see the announcements of that college).

3. Every application for admission as a special student must be presented in writing to the Committee on Entrance and must set forth fully the applicant's reason, together with a detailed statement of the studies he desires to pursue.

4. Special students are subjected in all respects to the usual rules relating to registration and scholarship. They may be assigned to classes for which they apply, it being understood, however, that admission to any class rests entirely with the instructor in charge and further, that admission to any class when so granted does not necessarily imply credit for prerequisites.

ADVANCED STANDING.

Applications for advanced standing on account of work of college grade done before entrance to the University should be made to the Committee on Entrance not later than two weeks after the applicant's matriculation. Certificates of college credits must be presented on a separate form from the entrance credits.

If no certificates are offered or if those offered are considered by the Committee on Entrance to be irregular or insufficient, the committee will arrange for an examination of the applicant. In this case the dean of the proper college will issue examination cards on which after examination the head of each department will report to the Committee on Entrance the numbers, names, and credit values of the courses, if any, for which the applicant is entitled to credit.

REGISTRATION.

A student who registers at West Virginia University must fill out a student's registration blank at the office of the registrar in Woodburn Hall or at the office of the dean of the college he desires to enter. The blanks of women students must be filled out in the Women's Parlor and approved by the dean of women.

This registration blank is then presented to the registrar, who will issue in return a card stating the amount of fees to be paid, the college which the student is to enter, and the name of the class officer or adviser.

The fees as indicated on this card must then be paid to the financial secretary at his office in Science Hall. His receipt is stamped on the card.

The receipted card is then presented to the class officer designated, who will take it up, assign the student to his proper classes, prepare a study list and issue class cards admitting to these classes.

These class cards are then taken to the proper instructors, who will take them up, sign the study list, and enroll the student in their classes. Cadets should obtain from the commandant in the Armory a card of good standing and a blank requisition for text books, which blank is to be filled out by the various instructors and then presented at the bookstore in Martin Hall.

Finally the study list, properly signed by all instructors, must be returned to the class officer. Registration is not completed until this card has been returned.

All students are required to register at the beginning of each semester.

CLASSIFICATION AND SCHOLARSHIP.

THE CLASS OFFICER.

The duties of the class officer are as follows:

1. He assigns the student to proper courses, and sees that prescribed work is taken in order.

2. He supervises the selection of elective courses by the student and assists the student in planning his entire course, including both required and elective subjects, so as to avoid conflicts.

3. He keeps a record of the work of the student and reports his registration and standing to the registrar as required.

4. He recommends the student to the dean of his college for his degree or diploma upon the completion of the work required for it.

5. Not later than October 15 in each year each class officer must submit to his dean a provisional recommendation for graduation for each student under his care who expects to complete undergraduate work by the following commencement day. Not later than February 20 the class officer must make to the dean a final recommendation for graduation for each candidate. Both the provisional and final recommendation must be made on forms furnished by the dean and must include a statement of the work already completed by the candidate and a schedule of his work for the remainder of the year.

6. He has general oversight of the student's college life. The student will look to his class officer for advice and guidance in all matters pertaining to his work. Withdrawal from classes, changing from one class to another, etc., will always require the class officer's consent.

CREDITS.

A credit or semester-hour represents the amount of work done in one semester (eighteen weeks), in one recitation hour with two preparation hours a week. From two to three hours of laboratory work is considered equivalent to an hour of recitation, according to the amount of outside work assigned in connection with the laboratory hours.

Fewer than ten hours in an ancient or modern language will not be counted toward any University degree, diploma or certificate.

CLASSIFICATION.

The number of courses required for classification as a sophomore or second year, junior or third year, and senior or fourth year student varies in the different colleges.

First-year students in the College of Law and in the School of Medicine, who have completed two years of academic work, have the rank of juniors.

First-year students in the College of Law, who have completed one year of academic work, have the rank of sophomores.

Classification of students for publication in the catalogue will be made on the basis of the work to their credit on November 1, of each year, except in the case of students entering later in the year.

MAXIMUM AND MINIMUM WORK.

A maximum and minimum number of hours for which a student may register in any one semester is established for each college. A student desiring to do irregular work, more or less than the prescribed number of hours in any college, must obtain permission from the committee on students' courses and hours in that college.

Registration for more than the specified maximum work shall be permitted only for the removal of conditions or better adjustment of schedules and not in any case for the purpose of shortening the time regularly required for the work of the degree sought by the student.

SUBSTITUTION FOR REQUIRED COURSES.

A student who desires to substitute another course in place of any course prescribed in his curriculum or required for the degree toward which he is working, must obtain permission for such substitution from the committee on students' courses and hours in his college, but there can be no substitution from group to group. For list of groups see announcements of various colleges.

CHANGES IN REGISTRATION.

The permission first of the instructor and then of the class officer shall in all cases be necessary for the withdrawal of a student from any course or for his transfer from one course to another. After the mid-semester period the permission of the committee on students' courses and hours in the college concerned must also be obtained. If a student discontinues a course without permission his standing in that course is reported to the registrar as zero.

A change from one major subject to another in the same college will require the consent of the committee on students' courses and hours in that college. A change of major will not be permitted after the completion of the junior year.

Students may be transferred from one college to another with the approval of the deans of the respective colleges, but in all cases

such students must meet the requirements of the curriculum of the college entered.

No permission to do irregular work more or less than the prescribed number of hours, to make substitutions for required work, or to make any change of registration as above stated is valid until such permit has been reported to the Committee on Classification and Grades for approval and record or until notice of the action taken has been given to the student either by his class officer or by the secretary of the committee.

WITHDRAWAL FROM THE UNIVERSITY.

A student desiring to withdraw from the University must apply to the President, or, in his absence, to the registrar, for permission. When the withdrawal permit has been secured it must be presented by the student to his class officer, who will approve it and forward it to the registrar. Students who withdraw from the University without permission will have their grades reported as zero at the end of semester and then be indefinitely suspended.

ABSENCES.

Students are required to be present at every recitation and examination of the courses for which they are registered. Punctuality, regular attendance, and attention to the work of the class room will be largely considered in determining the class grade of the student.

Students who find it necessary to be absent from Morgantown while the University is in session must secure permission, in advance from the President, or, in his absence, from the registrar.

Cadets who wish a leave of absence from duty or who desire to withdraw from the University temporarily during their term of enlistment must apply to the commandant for a furlough.

Any student who has seven unexcused absences is debarred from attendance at all classes until he has been restored to good standing by the President.

At the close of each day all absences are reported by the instructors to the registrar. Absence report cards are used for this purpose. Excuses for absence should be made to the deans. Women students, before going to the dean, should first present their excuses to the dean of women. In cases of illness a certificate from the University Dispensary physician or other practicing physician of the city is required. Every unexcused absence effects a reduction of one per cent. in the student's final grade for the course.

In case of absences at the beginning of either semester a deduction of two per cent. from the final grade in every subject is made for each exercise missed, for all absences not more than seven in number, unless such absences are excused by the Committee on Clas-

sification and Grades. If the absences are more than seven in number full credit for the course is not given, unless such absences are excused by the committee and the work missed made up to the satisfaction of the instructor. Excuses for such absences must be presented to the committee on special blanks furnished for that purpose.

EXAMINATION AND GRADES.

Method of Grading. In practically all the courses offered in the University the student receives both a preliminary or mid-semester grade and a final grade. According to the system of grading employed 100% is regarded as a perfect grade and 70% as a passing grade. The mid-semester standing of the student is based on the daily recitation grades and on a special test given during one or more regular recitation periods. Mid-semester grades are not entered on the registrar's record. The final grade is based on the class standing for the entire semester and on a written final examination to which a special period of two or three hours is devoted, except that in the second semester the manner of determining the final grade of senior and graduate students provisionally approved for graduation shall be left with the instructor. Any student not satisfied with his grade shall, however, have the right to take the examination with his class if he so desires.

Final examinations are held during the last week in each semester.

Absence from Examination. If the student attends the course throughout the semester and is absent from examination without permission, the instructor shall count the examination as zero, and report the final grade as one-half the recitation grade. If the student is absent from examination for reasons satisfactory to the instructor and has a recitation grade of eighty-five or over, the instructor may report the recitation grade as the final grade in the subject. If the recitation grade is under eighty-five, and the absence is for satisfactory reasons, the fact will be recorded on the student's class card and on the class officer's record, and the student may on application to the instructor obtain permission to take the examination at a later time.

Reports. Instructors must report all grades to the proper class officers on the class cards presented by the students at their entrance to the course. Mid-semester grades must be reported on or before the "Day for Mid-semester Reports," as announced in the calendar. Final grades for the students in each course must be reported within two days after the close of the final examination in that course. In no case should a grade be reported as "incomplete" or held over to a later time. Each class card except in cases of absence from examination as provided above, must bear a definite percentage grade.

The class officers will enter these grades on their reports and present the latter to the registrar not later than the Monday following the close of the mid-semester or the final examination period.

In the second semester the final standing of all senior and graduate students provisionally approved for graduation must be reported to the class officers not later than two weeks before commencement day. The class officer must report these grades to the registrar within two days. Examinations to remove any conditions pending for these students must be taken at least one week before commencement day.

At the mid-semester report period the class officer should return the class cards to the various instructors immediately after recording the grades. After the final grades have been reported and recorded at the end of the semester the class officer should retain the class cards in his files for at least four years before destroying them.

Conditions and Failures. If the final grade of any student for any course is below sixty, it shall be recorded as a "failure," and the student must take the course again if he desires credit for it. If the final grade is sixty, or over, but below seventy, it shall be recorded as a "condition," and the student shall have the privilege of a second examination. Request for such a second examination must be made to the instructor not later than ten days after the opening of the succeeding semester and the examination must be taken at the time designated by him. A condition not removed within the semester following the one in which it was imposed becomes a failure, unless special permission to postpone the examination is obtained. If the final grade after a second examination is again below seventy it shall be recorded as a "failure."

Reports to Parents. A report of each student's work is made at the close of each semester, either to the student himself or to his parent or guardian. A complete record is also kept in the registrar's office. The fee for making a copy of this record after the semester reports have been sent out is one dollar.

In case where a student's work is unsatisfactory as shown by the mid-semester test, a mid-semester report will also be made both to the parent or guardian and to the student.

SUSPENSIONS.

1. Any student who fails either to make a standing of seventy per cent in courses amounting to at least half of the total number of semester hours for which he is registered, or to make an average standing of at least sixty per cent. in all of his courses for any semester is suspended from the University for the succeeding semes-

ter. If, however, the failure as above is due to the abandonment of any class, or to withdrawal from the University withoue permission, or to absence from examination without reasonable excuse, the suspension becomes indifinite.

Any student whose average standing in all studies as shown by the preliminary or mid-semester report is less than fifty per cent is suspended from the University for the remainder of the semester.

2. If a student suspended by the operation of the above rule re-enters the University and again becomes subject to it, his suspension becomes indefinite.

WORK DONE OUT OF RESIDENCE.

The doing of regular residence courses **in absentia** is discouraged. In cases of courses begun at the University and not completed by reason of illness or otherwise, however, permission to complete the work **in absentia** under the direction of the regular University instructors may be granted by the Committee on Classification and Grades; but in such cases credit shall be given only upon report of a grade of not less than eighty per cent on final examination.

The foregoing statement does not apply to University Extension Courses.

DEGREES.

All University degrees are conferred by the State Board of Education upon recommendation of the University faculty. Degrees are granted only once in each year at the annual University commencement.

The names of all students who are to appear as candidates for degrees in any year must be presented by their respective class officers to the dean of the college not later than January 1. All students who intend to present themselves as candidates for degree in any year should as a rule, therefore, give notice of their intention to their respective class officers not later than December 1.

BACCALAUREATE DEGREES.

Credits Required.

The various baccalaureate degrees conferred by the University and the number of semester hours of work required for each degree are as follows:

Bachelor of Arts, (A.B.)
- Regular course ..... 128 Hrs.
- Combined course for A.B. and LL.B. degrees....124 Hrs.
  (96 hours in College of Arts and Sciences and first year course, 28 hours, in College of Law.)

Bachelor of Science, (B.S.)
- Combined course, preliminary to degree in medicine ..... 136 Hrs.
  (64 hours in College of Arts and Science, and two years' work, 68 to 72 hours, in School of Medicine.)
- Combined course, preliminary to degree in Engineering ..... 128 Hrs.

Bachelor of Laws, (LL.B.) ..... 118 Hrs.
(32 hours in the College of Arts and Science and 86 hours in the College of Low.)

Bachelor of Science in Mechanical Engineering, (B.S.M.E.) ..... 148 Hrs.

Bachelor of Science in Civil Engineering, (B.S.C.E.) ..... 148 Hrs.

Bachelor of Science in Electrical Engineering, (B.S.E.E.) ..... 148 Hrs.

Bachelor of Science in Engineering of Mines, (B.S.E.M.) ..... 148 Hrs.

Bachelor of Science in Chemical Engineering , (B.S.Chem.E.) ..... 148 Hrs.

Bachelor of Science in Agriculture, (B.S.Agr.).....144 Hrs.
Bachelor of Science in Home Economics,
(B.S.H.E.) ..... 128 Hrs.

Requirements as to Residence.

Students who come to the University from other colleges or universities are advised to make the transfer not later than the beginning of the junior year and in no case will a student who matriculates in the University later than October 1 in any year be permitted to receive a degree at the next commencement.

In special cases students who desire to leave the University at the close of the junior year to enter another institution with the purpose of taking a combined course leading to two degrees or of preparing for graduate study may, upon application beforehand to the Committee of Classification and Grades, be permitted to do the work of the senior year, or a part thereof at such other institution and to receive the bachelor's degree from the University upon the presentation of the proper credits.

In no case, however, will a student be granted a bachelor's degree from this University who has not done either a total of ninety hours of his work or the last thirty hours of it in actual residence at the University.

GRADUATE DEGREES.

The University does not confer the degree, Doctor of Philosophy, but will certify to other institutions such graduate work as may be applicable toward this degree.

The University confers the following master's degrees: Master of Arts (A.M.), Master of Science (M.S.), Master of Science in Mechanical Engineering (M.S.M.E.), Master of Science in Civil Engineering (M.S.C.E.), Master of Science in Electrical Engineering (M.S.E.E.), Master of Science in Engineering of Mines (M.S.E.M.), and Master of Science in Agriculture (M.S.Agr.). A master's degree is conferred upon the following conditions:

Candidacy.

1. A candidate for a master's degree must hold a bachelor's degree from west Virginia University or from another institution in which the requirements are substantially equivalent. He must have completed all the essential requirements for the bachelor's degree corresponding to the master's degree for which he applies.

Those who wish to become candidates but lack undegraduate preparation will be admitted to graduate study, but must at once make

up their deficiencies by taking the necessary undergraduate courses. On completion of such undergraduate courses they become eligible to candidacy.

Those who have received their bachelor's degree and wish to broaden their education without reference to a higher degree, will be admitted to graduate study without restriction as to courses.

Seniors in the colleges of West Virginia University who have completed the work for the bachelor's degree but who have not yet received the degree, may have work credited toward the master's degree at the discretion of the Committee on Graduate Work.

2. **Application for Admission.** Students who desire to register for graduate courses leading to a master's degree should submit their applications for admission to candidacy to the degree to the Committee on Graduate Work, either in person or by letter, some weeks prior to the opening of the semester in which they desire to register. Blank forms can be obtained on application. The application must be in the hands of the Committee at the time when the student presents himself for registration in the courses which he desires to take for graduate credit and not later than October 1 in the college year in which he desires to have the degree conferred.

In his application the student must announce his choice of a major subject and must submit a general outline of his proposed course of study. The major subject chosen must be either the same as the undergraduate major or one in which the candidate has an equivalent undergraduate preparation.

No student will be admitted to graduate study until properly certified credentials from his college or university are filed with the registrar and approved by the Graduate Committee.

The Special Sub-Committee.

If the student is accepted as a candidate for the master's degree the Committee on Graduate Work will appoint a special sub-committee of three professors, including the professors in charge of the work in the candidate's major and related subjects, whose duties shall be: (a) to arrange a specific course of study; (b) to act as advisers; (c) to examine and pass upon the thesis should one be required; and (d) to conduct the final examination.

Requirements for the Degree.

1 **Term of Residence.** Time and facilities are recognized as two important essentials for bona fide graduate work. A candidate must pursue graduate courses for at least thirty-six weeks after the completion of the work for his undergraduate degree. Graduate credit is

not given for work done **in absentia**, except in case of a thesis requiring research which can be conducted to advantage elsewhere.

2. **Course of Study.** The candidate must do thirty-two hours of graduate work, which at the discretion of the department in which he has chosen his major subject may or may not include a thesis. At least sixteen hours shall be in the candidate's major subject; and any remaining hours shall be in subjects related thereto. Courses primarily designated for graduate students and distinctly senior courses open to graduates, are indicated in the catalogue, but other advanced courses and special research courses not listed in the catalogue may be credited with the approval of the Committee on Graduate Work. In rare instances advanced undergraduate courses, not regularly open to graduates, may be approved for graduate work with reduced credit; but elementary courses are never credited.

No work done before the completion of the work required for the bachelor's degree will be credited toward the master's degree unless the work and courses have been regularly approved by the committee.

The specific course of study must be presented to the Committee on Graduate Work for its approval within two weeks after the acceptance of the student's application.

No course will be approved for graduate credit unless the catalogue specifically states that it is intended for graduate students.

Courses given during the college year will not be accepted for graduate credit in the Summer School unless they are given such credit in the annual catalogue.

NOTE—Since the principal aim of graduate study is the development of the knowledge necessary to do independent work and the promotion of the spirit of research, each candidate for a degree is expected to have a wide knowledge of his subject and of related fields of work and to pursue a course of related reading and study in addition to his University work.

3. **Thesis.** A statement of the general subject of the thesis, with the written approval of the chairman of the special committee, must be furnished to the Committee on Graduate Work within six weeks after the acceptance of the student's application. The thesis shall show acceptable investigation in the major subject. It shall be prepared under the direction of the department in which the student has chosen his major and shall be submitted for approval to the special committee at least four weeks previous to the commencement day at which the degree is expected. The thesis shall be presented in such form as may be prescribed by the Committee on Graduate Work. If the thesis is approved, two typewritten or printed bound

copies shall be deposited in the University Library at least one week before the degree is conferred. The usual credit for a thesis is from five to seven hours.

4. **Final Examination.** The final examination of the candidates shall be oral and shall cover the major and related courses and thesis, or such part thereof as the special committee may deem desirable. This examination shall be open to the public and shall be held at least three weeks before the commencement day on which the degree is expected. The Committee on Graduate Work shall delegate one of its members to attend the examination.

The special committee shall report their opinion of the thesis and the result of the examination of the candidate to the Committee on Graduate Work at least ten days before commencement.

NOTE—For announcement concerning professional degrees in the College of Engineering, see the announcements of that college.

GENERAL INFORMATION.

DISCIPLINE.

The rules and regulations which students are required to observe are few, simple and reasonable; civil and orderly conduct; punctuality and regularity in attendance upon all required exercises; reasonable diligence in the performance of the work prescribed, and abstinence from vices.

Students who do not comply with these requirements will not be allowed to remain in the University.

All matters of discipline are in charge of the President of the University in consultation with the dean of the college or head of the division of the University in which the student concerned is enrolled.

THE CONVOCATION.

The University Convocation is held every Wednesday morning at ten o'clock in Commencement Hall, under the direction of the Chaplain of the University. No classes or other University exercises are held at this hour, and opportunity is afforded for all members of the University, both instructors and students, to attend the meeting. The hour is occupied by lectures and addresses, discussion of student interests and problems, and the consideration of questions relating to the general University welfare.

In connection with the weekly convocation brief devotional exercises are held. The singing at these exercises is in charge of the Director of the School of Music. Attendance is entirely voluntary.

CHRISTIAN ASSOCIATIONS.

The University Young Men's Christian Association is a voluntary association of college men for the purpose of promoting and directing widely varied student activities for a religious motive. Membership is open to all men of the University.

The Young Women's Christian Association is an organization for a similar purpose. Membership is open to all women enrolled in the University.

An important feature of the work of each association is the maintenance of an employment bureau which enables a number of young men and women to find sufficient work to pay their expenses in college.

Each association employs a secretary, and students desiring information regarding employment, or other activities of the associations, should address one or the other of these officers.

PHI BETA KAPPA.

The Alpha of West Virginia Chapter of the Phi Beta Kappa Society is established at the University. Stated meetings or public exercises of the Society are held twice annually: the anniversary meeting on December 5, and the annual meeting during Commencement week. The honor of membership may be conferred upon candidates for the degree of Bachelor of Arts who have maintained a high scholarship rank during their college course; also upon members of the faculty and alumni of the University, and upon distinguished citizens of the state. The president of the chapter for the year 1922 is President Frank Butler Trotter; the secretary, Professor F. W. Truscott.

THETA PSI.

The Theta Psi Honorary Engineering Fraternity is an organization to which students in the College of Engineering may be elected upon the attainment of certain specified high standards of scholarship in undergraduate courses. Elections are held each fall on the basis of grades attained in the work of the previous year.

STUDENT ORGANIZATIONS.

There are in the University various societies and clubs, devoted chiefly to the educational, social and athletic interests of the students. Several Greek letter fraternities and sororities have established chapters at the University and most of these occupy their own chapter houses.

Some of the more important of these organizations are: The English Club, the Beowulf Gedryht, The Education Club, The Philhellenic Club, The West Virginia University Scientific Society, The Engineering Society, The University Grange, The University Dramatic Club, The University Choir, and the Philharmonic Orchestra.

STUDENT PUBLICATIONS.

The Athenaeum, a weekly college newspaper, is published by the students who elect annually the editorial staff.

The College Annual, The Monticola, is published by the junior class.

All student publications are under the supervision of a faculty committee on student publications.

STUDENT SOCIAL LIFE.

The general oversight of the social activities of the student body and of the fraternity and sorority life in the University is placed in the hands of committees of the faculty. The Committee on Fraternities and the Committee on Sororities are constituted in accord with the following order of the Board of Education:

(1) No fraternity nor sorority, other than those now in existence in the University shall be established without the consent of the University Council of Administration. Application for this consent shall be made by a petition signed by all of the students interested.

(2) No student shall be initiated into any fraternity or sorority, nor reside in any fraternity house, until such student has been in residence at the University one full semester, and has received credit on the records of the University for not less than twelve semester hours of work done in the University classes; nor shall any student be initiated into any fraternity or sorority, who has not full college standing. The requirement of one semester's residence will be waivd in the case of a student coming into the University from any other university or college, and receiving advanced standing sufficient to give a classification of sophomore or higher.

(3) Each fraternity at the beginning of each scholastic year, shall designate two of its members as a committee to represent the fraternity in all matters calling for conference with the President of the University or University authorities. Each sorority shall likewise select a committee of two to represent it in such conferences. Each fraternity and sorority shall certify to the registrar the names of the members chosen for its committee within two weeks after the opening of the fall semester of each year.

(4) The President of the University shall appoint a member of the faculty as a faculty representative for each fraternity, and in making such appointment he shall consult with the committee of each fraternity provided for in Rule 3. He shall in like manner appoint a faculty representative for each sorority. Wives of members of the faculty may be appointed by the President as faculty representatives of sororities.

It shall be the duty of the faculty representatives to keep in touch with the life and work of the fraternity or sorority, and to be the representative of the University under the direction of the President in all matters that may arise between the University and the fraternity or sorority. The faculty representatives of fraternities shall constitute a general committee of the faculty on fraternities, and the faculty representatives of sororities shall constitute a like cammittee on sororities.

(5) No person who is not a student of the University shall be initiated into any fraternity or sorority without the permission of the University Council of Administration.

(6) All efforts of fraternities or sororities to secure new members commonly known as "rushing" shall be under such regulations as may be agreed on by the fraternities and sororities. In the event of no agreement by fraternities or sororities, such regulations shall be made by the faculty committee on fraternities or the faculty committee on sororities in consultation with the fraternity or sorority committees, as provided in Rule 3 of this order. When approved by

the Council of Administration such regulations shall be in full force and effect.

The social life of the students in the University is under the general supervision of the faculty Committee on Social Affairs. This committee has supervision of every social function given by the University or by any organization within it, including fraternities, sororities and other student societies. Such social functions as balls, dances, picnics, excursions and receptions are supervised by this committee. The committee approves all dance programs, supervises the issuance of invitations for functions of a general University nature and sees that all social affairs held in the University are properly conducted.

In the performance of its duty the committee is governed by the following general regulations of the Board of Education:

(1) No indoor social function shall be given by the University or any of its departments or organizations in any other place than in University buildings. For this purpose, houses occupied by chartered fraternities or sororities, and the University leased dormitories shall be considered University buildings.

(2) No social affairs at night, of which dancing is a feature, shall be permitted to continue longer than 1 a. m. and this hour is allowable only in formal or "full program" affairs. Ordinary parties, dances, etc., must close not later than 11:30 p. m. Picnics, excursions, boat rides, etc., extending into the night, must be so arranged that the return to the University shall not be later than 11:30 p. m.

WOMEN'S STUDENT GOVERNMENT ASSOCIATION.

All women students of the University whose homes are not in Morgantown, whether they live in the Women's Hall, in sorority houses or in rooming houses in town, are members of the Student Government Association. The purpose of this association is to regulate all matters pertaining to the student life of its members, to further in every way the spirit of unity among the women of the University, to increase their sense of responsibility, and to be a medium for maintaining a high scholastic standard.

The officers of the association include a president, vice-president, secretary, and treasurer. Representatives from each class, and house-presidents, with the officers, constitute an executive board, which fixes all rules of the association and enforces penalties for their violation. The officers and members of the executive board are elected annually by the association. The board is responsible to the faculty advisory board of the association for all matters pertaining to the social life of the students. This advisory board consists of the dean of women and two other members of the faculty appointed by the President of the University.

In 1921 the association was admitted to active membership in the Intercollegiate Association of Student Government for Women Students.

THE DEAN OF WOMEN.

All the interests of the women students of the University are in charge of a special executive officer of the University, the dean of women. She is a member not only of the advisory board of the Student Government Association but also of the faculty Social Committee. Thus she is cognizant of all social activities engaged in by women students. The dean is a resident of the Women's Hall, where she comes into intimate personal relation with the young women and has immediate supervision of their social life.

THE WOMEN'S HALL.

The rooms in the Women's Hall accommodate 104 young women; the dining room nearly 300. Miss Susan Maxwell Moore, dean of women, is in charge of the hall. The Women's Hall Annex on Willey street affords rooms for 40. Mrs. Bertha Browning Purinton, the assistant to the dean of women, is in charge of the Annex. Those desiring information as to prices, board, or available rooms, either in the main dormitory or the Annex, should apply to Miss Moore.

Rooms may be engaged in advance, either in the main dormitory or the Annex, upon the payment of a retaining fee of $10. This amount will be deducted from the first semester's room bill. A student who for any good reason desires to relinquish a room thus engaged may have the fee refunded if she gives notice before August 15.

OTHER ROOMING PLACES FOR WOMEN STUDENTS.

With the approval of the dean of women young women students whose parents are not residents of Morgantown and who can not find accommodation in the hall, may secure rooming and boarding places with private families in the town. Such students are expected to conform to the usual hall rules regarding callers and hours and are not permitted to change their places of residence, or to be absent from Morgantown, or from their own rooms over night, without the permission of the dean of women.

BOARDING AND ROOMING PLACES.

The matter of furnishing information to new students regarding suitable boarding and rooming places is in charge of the Y. M. C. A. and Y. W. C. A. of the University. On their arrival in Morgantown new students should come directly to Woodburn Hall, where they will find complete lists of rooms and boarding places and also upper classmen who will help them in finding lodgings and in matriculating. During the opening days of the semester, committees from the two

Christian Associations meet new students at trains and are ready to render them every assistance possible.

Young men desiring information in advance of their arrival in Morgantown, may address the University Y. M. C. A., Morgantown, W. Va. Young women may address Miss Susan M. Moore, Dean of Women.

AID FOR STUDENTS.

The Employment Bureau, organized by the University Christian Association, undertakes to assist earnest and worthy students who are dependent upon their own efforts for the expenses of their education, to obtain various forms of employment in Morgantown. Prospective students desiring such aid should write to the secretary of the Y. M. C. A., or of the Y. W. C. A., before entering the University, stating the kind of work desired and the nature of past experience in any occupation. The work consists largely in waiting on table, caring for rooms and lawns, clerking in stores, stenographic services, etc.

PRIZES.

Awards for prizes in the University are made in accordance with the following rules:

No manuscript in whole or in part, shall be submitted in competition for two prizes.

Only students pursuing courses leading to baccalaureate degrees are eligible for any prize offered, except for the James F. Brown prize.

No student shall be eligible to enter any contest who has not been a resident student in this University for at least one semester preceding the semester in which the contest is to be held, and who, unless he be a competitor for the James F. Brown prize, is not a resident student in good standing in the University in the semester in which the contest is held.

No successful contestant may become for a second time a competitor for the same prize.

If in any contest the judges find no manuscript of sufficient merit, there shall be no award of that prize for that year.

Students who intend to compete in any essay-writing contest must notify the chairman of the Committee on Prizes not later than March 15. Three typewritten copies of each essay must be in the hands of the chairman of the committee not later than May 15.

The conditions upon which the awards in the several contests are made may be learned upon application at the President's office, or to the members of the Committee on Prizes.

The more important prizes offered in the University are:

The Bryan Prize in Political Science.

The Hon. William J. Bryan has given a sum of money, the annual income of which is to be offered as a prize to the student in the

University who shall write the best essay on some subject in the science of government. The amount of the prize for the present is $15.00. The subject assigned for the year 1922-23 is "Should the Constitution of West Virginia be Revised?"

The Tax Commission Prize.

The members of the State Tax Commission of 1902, W. P. Hubbard, Henry G. Davis, John K. Thompson, L. J. Williams and J. H. Holt, have given the sum of $1,350, the income of which is to be used annually as a prize for the "best original work bearing on matters of taxation in West Virginia." The conditions of competition are determined by the Council of Administration. The amount of the prize at present is $70.00. The subject assigned for 1922-23 is, "The Gross Sales Tax in West Virginia: Expendiency, Form, and Method of Administration."

The Russell Love Morris Prize.

Russell Love Morris, C. E., Professor of Civil Engineering, offers a prize of fifty dollars annually to the student of civil engineering who presents the best thesis on some subject of special application to the needs and resources of West Virginia.

The James F. Brown Prize.

Mr. James F. Brown, an alumnus of the University, "with a desire to stimulate the young men of the State to fuller consideration of the 'inalienable rights' of mankind, and especially those guaranteed by the Constitutions of the State and of the United States," has contributed to the University the sum of five thousand dollars to be invested and the income is to be "used as a prize for the best essay or paper each year on the subject of the individual liberties of the citizen as guaranteed by the constitution." The income may be given as a single prize, or it may be divided into a first and a second prize. For the present the award will be made as a single prize. Any senior or any graduate of any college of the University, within one year after receiving any bachelor's degree, may compete for this prize, but no holder of any graduate degree may become a competitor. The subject assigned for 1922-23 is, "The Constitutional Rights of One Accused of Crime."

Inter-Fraternity Scholastic Trophies.

Arleigh Lee Darby, Associate Professor of Romance Languages, offers a silver cup known as the Inter-Fraternity Scholastic Trophy. It is awarded at the end of the year to the fraternity having the highest average scholarship standing for that year and remains in the possession of that fraternity during the following year. The cup becomes the permanent property of the fraternity that first wins it three times.

Aaron Arkin, Professor of Pathology and Bacteriology, offers a silver cup to be called the "Inter-Sorority Scholastic Trophy." This prize will be awarded at the end of the academic year to the sorority having the highest average scholarship standing for the year. It will be in possession of that sorority for the following year. The cup will become the permanent property of the sorority that first wins it five times.

BUREAU OF RECOMMENDATION.

The Bureau of Recommendation, under the direction of the department of education, has for its aim:

1. To keep a record of the students or alumni of the University who wish to teach, to gather information as to their academic and professional qualifications and personal fitness for school work, and to recommend for vacancies those who seem most likely to prove themselves efficient.
2. To keep a similar record of alumni who wish to be transferred to other positions.
3. To assist boards of education and other school officials in securing teachers, and to co-operate with teachers' agencies in placing graduates of the University.

Students desiring recommendation for positions as teachers should take at least twenty hours in education. Those desiring recommendation for a position in a normal school or as principal or superintendent of schools should take at least thirty hours in education.

No student is assured of a position. General letters of recommendation are not given to students. Information obtained from professors and others is regarded as confidential. No charge is made for any services rendered. Blanks for registration will be furnished on application. The following is the committee on recommendation: President Trotter, Professors Winkler, Hill, Cavins and Hudelson, and Professor Deahl, secretary.

HIGH SCHOOL AND SUPERVISOR'S CERTIFICATES.

Graduation from the University with not less than twenty semester hours in education will secure recommendation for high school and for supervisor's certificates according to the following regulations:

1. No courses in education will be counted as part of the twenty hours unless approved by the Department of Education.
2. Persons who have received advanced standing in education must do at least ten semester hours in regular college courses. These courses must not repeat those taken in another school and they must be advanced work.
3. Only a limited number of hours done in the summer school may be counted toward certification.
4. Candidates for certification must demonstrate their fitness for recommendation by successful teaching in Education 10 or 22.
5. For the supervisor's certificate not fewer than five hours must be taken in administration and supervision.

SCOPE OF THE ENTRANCE REQUIREMENTS.

The following description indicates the extent of preparation expected in each of the several subjects offered for entrance credit for admission to the various colleges of the University.

ENGLISH.

Grammar and Elementary English. No student will receive full entrance credit in English whose work shows marked deficiency in spelling, punctuation, grammar, sentence structure, or paragraphing. The student should be prepared to state intelligently the essential principles of English grammar and to explain the synthetical structure of any sentence encountered in his reading. An elementary text-book on grammar should have been completed before the student enters upon his high school course. For more advanced study of the subject and for practical review, the material presented in the ordinary high school text-books on rhetoric may be utilized. The subject should be constantly reviewed in connection with the work in composition during the four years in the high school course.

Rhetoric and Composition. Systematic practice in theme writing and other forms of oral and written composition with instruction in the principles of rhetoric and the forms of discourse must form an important part of each unit of English. At least one theme weekly should be required throughout the course. Students who are not able to express themselves in clear, correct, and idiomatic English will not be given full credit. The subject upon which the student writes should not be drawn exclusively from literature. A considerable portion of them should be so distributed as to give proper training in the various forms of discourse.

Literature. In addition to the reading and study of English classics as outlined below, the student throughout his high school course should have opportunity to become familiar with the best magazines and newspapers and with the best current fiction and poetry.

The four units in English should include the following:

(a) One unit. English Classics and English Composition. The study of at least five English classics selected from the list below. The simplest narrative classics, both prose and poetry, should be selected. The aim of the work should be to stimulate interest in good literature and to enable the student to form vivid mental pictures and to understand fully the thought expressed. The aim of the composition work should be to secure facility and accuracy. The work should include letter writing, short themes in narration and description, and study of paragraphing and sentence structure.*

(b) One unit. English Classics and English Composition. Study of several other English classics. The work should include more complex forms of fiction and narrative poetry, simpler essays, and at least one of Shakespeare's plays.

(c) One unit. English Classics and English Composition. Reading and study of narrative and lyric poetry, of more difficult essays, and of several of Shakespeare's plays. In the work for both the second and third units the aim should be to make a study of form, structure, style, and purpose of the selection; the author's life; relation of the selection to its age and to other works of similar type. For both units the work in composition should include themes of moderate length in all forms of discourse; study of unity, coherence, and emphasis in sentences and paragraphs; kinds of sentences; diction; figures of speech.

(d) One unit. Advanced study of Classics; Rhetoric. A thorough and intensive study of the form, structure, and style, of at least one typical example of the novel, the drama, the lyric or epic poem, and the essay. A study of the principles of rhetoric employing some good advanced high school text-book, with frequent and systematic theme writing, must form a part of this unit.

The following list of classics is suggested:

I. Longfellow's Evangeline and Courtship of Miles Standish; Whittier's Snowbound; Lowell's Vision of Sir Launfal; Coleridge's Rime of the Ancient Mariner; Macaulay's Lays of Ancient Rome; Goldsmith's Deserted Village; Irving's Sketch Book; Hawthorne's Twice Told Tales; Franklin's Autobiography; Aldrich's Story of a Bad Boy; Warner Being a Boy, A Hunting of the Deer, etc.; Burroughs' Sharp Eyes, Birds and Bees, etc.; Dickens' Christmas Carol; Stevenson's Treasure Island.

II. Stories from the Bible; Scott's Lady of the Lake, Marmion, Ivanhoe, Quentin Durward; George Eliot's Silas Marner; Goldsmith's Vicar of Wakefield; Mrs. Gaskell's Cranford; Cooper's Last of the Mohicans, The Spy, The Pilot; Blackmore's Lorna Doone; Dickens' Tale of Two Cities, David Copperfield; Arnold's Sohrab and Rustum; Byron's Mazeppa and the Prisoner of Chillon; Shakespeare's Merchant of Venice, As You Like It, Julius Caesar, Twelfth Night; Addison's De Coverly Papers; Thoreau's Succession of Forest Trees; Stevenson's An Inland Voyage and Travels with a Donkey; Kipling's Captains Courageous.

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*Reading of good literature outside of class and memorizing of notable passages in prose and verse should be required, but outside reading accompanied by written reports or reviews made according to a stereotyped model, in place of a thorough study of assigned lessons, class instruction and discussion, will not be considered as satisfactorily fulfilling the requirement of any unit.

III. Page's Red Rock; Churchill's Mr. Crewe's Career; Thompson's Alice of Old Vincennes; Norris' The Pit; Jackson's Ramona; Smith's Caleb West, Master Diver; Johnston's To Have and to Hold; Van Dyke's The Blue Flower and Other Stories; Mitchell's Hugh Wynne—Free Quaker.

IV. Novels; Thackery's Henry Esmond; George Eliot's Silas Marner or Romola; Jane Austin's Pride and Prejudice; Hawthorne's The House of the Seven Gables. Dramas: Shakespeare's Macbeth, Lear, or Henry V. Poems: Tennyson's Idylls of the King; Milton's Shorter Poems; Browning's Selected Poems; Palgrave's Golden Treasury. Essays: Lamb's Essays of Elia; Emerson's Essays; Ruskin's Sesame and Lilies; Carlyle's Heroes and Hero Worship; Essay on Burns; Macaulay's Essay on Addison and Life of Johnson; Washington's Farewell Address; Webster's Bunker Hill Oration; Lincoln's Gettysburg Speech, etc.

LATIN.

(a) One unit. Such knowledge of inflection and syntax as is given in any good preparatory Latin Book, together with the ability to read easy selections from Caesar.

(b) One unit. Four books from Caesar's Gallic War, or its equivalent in Latin of equal difficulty. The ability to write simple Latin based on the text.

(c) One unit. Six orations of Cicero. The ability to write simple Latin based on the text. The simpler historical references and the fundamental facts of Latin syntax.

(d) One unit. Six books of Virgil, with history and mythology. Scansion of hexameter verse. Either (c) or (d) may be offered for the third unit, but one year of composition must be included.

GREEK.

(a) One unit. Introductory lessons, elements of grammar; easy translations from the Anabasis: translation into Greek of easy continuous prose based upon the Anabasis.

(b) One unit. Xenophon, the first four books of the Anabasis.

(c) One unit. Homer, the first three books of the Iliad (omitting II-492 to end) and the Homeric constructions, forms and prosody; constant practice in sight and prose composition.

GERMAN.

(a) One unit. A thorough knowledge of elementary syntax; constant drill in pronounciation, oral translation, and composition; translation of seventy-five to one hundred pages; advanced syntax; composition throughout the year.

(b) One unit. Modern prose and familiar poems, two hundred pages; advanced syntax; intermediate composition throughout the year.

(c) One unit. Advanced prose, four hundred pages; advanced composition throughout the year.

FRENCH.

(a) One unit. (1) The essential principles of French etymology and syntax, and especially, a thorough knowledge of the pronoun and of the regular and irregular verb; (2) ability to write in French sentences of moderate difficulty; (3) the reading of from one hundred and fifty to two hundred pages of modern French prose; (4) ability to pronounce the language correctly and with some fluency.

(b) One unit. (1) Twenty pages of advanced prose composition; (2) at least three hundred pages of modern French prose; (3) at least three hundred pages of modern French plays.

HISTORY.

From one to three units may be offered, selected from the following:

(a) Ancient History to 800 A. D.—one unit.

(b) Mediaeval and Modern European History—one-half to one unit. The amount of credit will depend upon the time given to the subject.

(c) English History—one-half to one unit. The amount of credit will depend upon the time given.

(d) American History, or American History and Civics—one unit.

The student should be familiar with the important events and should have a clear knowledge of the general development of the period of history which he offers for credit.

A whole year that covers the whole field of general history with a good text-book and with notes on collateral reading and preparation of maps will be accepted as one unit, although it is believed that better results will be obtained by spending a whole year on ancient history and another year on the mediaeval and modern period.

American history and civics should be preceded by English history, and should not be given before the third year in the high school course, in case three years are given to history. Ancient history

should be followed by English history in case mediaeval and modern history are not given.

The study of civics must not precede the study of American history; and, if studied as a separate branch following the course in American history, some advanced text such as Forman's Advanced Civics should be used. An outline knowledge of elementary civics, such as is presented in Forman's First Lessons in Civics, or in Peterman's Civics, is presupposed.

MATHEMATICS.

(a) Algebra through quadratics—one unit. The four fundamental operations for rational algebraic expressions; factoring, highest common factor, lowest common multiple, complex fractions, solution of equations of the first degree, radicals including the extraction of the square root of polynominals and numbers, fractional and negative exponents, quadratic equations, and equations containing one or more quadratic equations, and problems involving the use of such equations.

(b) Plane geometry—one unit. The completion of any standard text with original exercises and problems.

(c) Algebra—one-half unit. Review of essentials followed by ratio and proportion, the binominal theorem for positive and integral exponents, arithmetical and geometrical progressions.

(d) Solid geometry—one-half unit. Properties of straight lines and planes, dihedral and polyhedral angles, projections, polyhedrons, including prisms, pyramids, and the regular solids, cylinders, cones, and spheres, spherical triangles, measurements of surfaces and soils.

(e) Plane trigonometry—one-half unit. Definitions and relations of the six trigonometrical functions as ratios, proofs of important formulae, theory of logarithms and use of tables, solutions of right and oblique plane triangles.

SCIENCE.

(a) Physics—one unit. Credit will be given for one year's work with any standard text-book, upon the presentation of a satisfactory note-book, covering at least thirty-two experiments. The note book should contain the student's own record of his laboratory experiments and a signed statement from his teacher that the book is the original record of the student's observations. Students deficient in laboratory work may make up this deficiency in the University.

(b) Chemistry—one unit. Credit will be allowed for the completion in a satisfactory manner of any standard elementary text in

inorganic chemistry, accompanied by individual laboratory work. A full year should be given to the work.

(c) Botany—one unit.

(d) Zoology—one unit.

Work in either botany or zoology, to be credited, must have been accompanied by individual laboratory work. The exact extent of the work which should be done cannot be stated here, but, for the maximum credit, it should be as much as a competent teacher, trained in laboratory methods, can accomplish in from one to one and one-half years. In estimating the time employed, two hours of laboratory work will be counted as the equivalent of one recitation period. It will be necessary for applicants to present their laboratory notes and drawings.

In botany the class should cover the ground of Coulter's "A Text Book in Botany," or Bergen's "Foundation of Botany," or their equivalent.

In zoology the class work should cover about what is represented in Kellogg's "Elementary Zoology" (Henry Holt), or in Parker and Haskell's Zoology, one-volume edition (Macmillan & Co.). The amount of laboratory work that should be done is somewhat less than is outlined in Scheffer's manual (Blakiston).

(e) Biology. A half year of botany and a half year of zoology each accompanied by individual laboratory work.

(f) Physical Geography—one-half unit.

(g) Physiology—one-half unit.

Credit for one-half unit each in physical geography and physiology will be allowed—as elective only—if taught in a scientific manner in an accredited or recognized secondary school. The use of a standard text should be supplemented by proper illustrative methods and proper observation. One-half year must be given to each subject.

CLASSIFIED HIGH SCHOOLS, 1921-1922.

HIGH SCHOOLS OF FIRST CLASS.

Adamston, Coal district, Harrison County.
Alderson, Alderson independent district, Monroe County.
Ansted, Mountain Cove, Fayette County.

Beckley, Town district, Raleigh County.
Belington, Belington independent district, Barbour County.
Benwood, Union district, Marshall County.
Berkeley Springs, Bath district, Morgan County.
Berwind, Big Creek district, McDowell County.
Blacksville, Clay district, Monongalia County.
Bluefield, Beaver Pond district, Mercer County.
Bramwell, Rock district, Mercer County.
Bridgeport, Simpson-Bridgeport independent district, Harrison County.
Bristol, Ten Mile district, Harrison County.
Buckhannon, Buckhannon independent district, Upshur County.
Burnsville, Salt Lick district, Braxton County.

Cairo, Grant district, Ritchie County.
Cameron, Cameron district, Marshall County.
Ceredo, Ceredo independent district, Wayne County.
Charleston, Charleston independent district, Kanawha County.
Charles Town, Charles Town district, Jefferson County.
Chester, Chester independent district, Hancock County.
Clarksburg, Clarksburg independent district, Harrison County.
Clay, Clay County High School, Clay County.
Clendenin, Big Sandy district, Kanawha County.
Cowen, Glade district, Webster County.

Davis, Davis district, Tucker County.

East Bank, Cabin Creek district, Kanawha County.
Elkins, Elkins independent district, Randolph County.
Elizabeth, Elizabeth joint district, Wirt County.

Fairmont, Fairmont independent district, Marion County.
Fairmont, East Side Fairmont independent district, Marion County.
Fairview, Paw Paw district, Marion County.
Farmington, Lincoln district, Marion County.
Follansbee, Cross Creek, Brook County.

Gap Mills, Sweet Springs district, Monroe County.
Gary, Adkin district, McDowell County.
Gassaway, Otter district, Braxton County.
Grafton, Grafton independent district, Taylor County.
Greenbank, Greenbank district, Pocahontas County.
Griffithsville, Duval district, Lincoln County.

Harpers Ferry, Harpers Ferry district, Jefferson County.
Harrisville, Harrisville independent district, Ritchie County.
Hedgesville, Hedgesville district, Berkeley County.
Hillsboro, Little Levels district, Pocahontas County.
Hinton, Hinton independent district, Summers County.
Huntington, Huntington independent district, Cabell County.

Iaeger, Sandy River district, McDowell County.

Jane Lew, Jane Lew independent district, Lewis County.

Keyser, Keyser independent district, Mineral County.
Kingwood, Kingwood district, Preston County.

Littleton, Clay district, Wetzel County.
Logan, Logan district, Logan County.
Lost Creek, Grant district, Harrison County.
Lumberport, Eagle district, Harrison County.

Man, Triadelphia district, Logan County.
Mannington, Mannington district, Marion County.
Marlinton, Edray district, Pocahontas County.
Martinsburg, Martinsburg district, Berkeley County
Masontown, Valley district, Preston County.
Matewan, Magnolia district, Mingo County.
Matoaka, Rock district, Mercer County.
Middlebourne, Tyler County High School, Tyler County.
Milton, Grant district, Cabell County.
Moorefield, Moorefield district, Hardy County.
Morgantown, Morgantown independent district, Monongalia County.
Montgomery, Kanawha district, Fayette County.
Moundsville, Moundsville independent district, Marshall County.
Mount Hope, Fayetteville district, Fayette County.

Newburg, Lyon district, Preston County.
New Cumberland, New Cumberland independent district, Hancock County.
Newell, Grant district, Hancock County.
New Martinsville, Magnolia district, Wetzel County.
Northfork, Northfork district, McDowell County.

Oak Hill, Fayetteville district, Fayette County.

Parkersburg, Parkersburg independent district, Wood County.
Oak Park, Wheeling, Triadelphia district, Ohio County.
Parsons, Black Fork district, Tucker County.
Paw Paw, Cacapon district, Morgan County.
Pennsboro, Clay district, Ritchie County.
Piedmont, Piedmont district, Mineral County.
Pine Grove, Grant district, Wetzel County.
Point Pleasant, Point Pleasant independent district, Mason County.
Princeton, East River district, Mercer County.
Pullman, Union district, Ritchie County.

Ravenswood, Ravenswood independent district, Jackson County.
Reader, Green district, Wetzel County.
Richwood, Richwood independent district, Nicholas County.
Ripley, Ripley independent district, Jackson County.
Rivesville, Paw Paw district, Marion County.
Romney, Romney district, Hampshire County.
Ronceverte, Fort Springs district, Greenbrier County.
Rowlesburg, Reno district, Preston County.

Saint Albans, St. Albans independent district, Kanawha County.
Saint Marys, Washington district, Pleasants County.
Salem, Salem independent district, Harrison County.
Sardis, Sardis district, Harrison County.
Sherrard, Union district, Marshall County.

Shinnston, Clay district, Harrison County.
Sistersville, Sistersville independent district, Tyler County.
Smithfield, Grant district, Wetzel County.
Spencer, Spencer independent district, Roane County.
Summersville, Nicholas County High School, Nicholas County.
Sutton, Sutton independent district, Braxton County.

Terra Alta, Portland district, Preston County.
Thomas, Fairfax district, Tucker County.
Tunnelton, Kingwood district, Preston County.

Wadestown, Battelle district, Monongalia County.
Warwood, Wheeling, Richland district, Ohio County.
Webster Springs, Fork Lick district, Webster County.
Welch, Brown's Creek district, McDowell County.
Wellsburg, Wellsburg independent district, Brooke County.
Weirton, Butler district, Hancock County.
West Milford, Union district, Harrison County.
West Monongah, Lincoln district, Marion County.
Weston, Weston independent district, Lewis County.
West Union, West Union independent district, Doddridge County.
Wheeling, Wheeling independent district, Ohio County.
White Sulphur Springs, White Sulphur Springs district, Greenbrier County.
Williamsburg, Williamsburg district, Greenbrier County.
Williamson, Williamson independent district, Mingo County.
Williamstown, Williams district, Wood County.

HIGH SCHOOLS OF SECOND CLASS.

Barrackville, Fairmont district, Marion County.
Bethany, Buffalo district, Brooke County.
Beverly, Beverly district, Randolph County.
Bunker Hill, Mill Creek district, Berkeley County.
Bruceton Mills, Grant district, Preston County.
Burch, Lee district, Mingo County,

Chattaroy, Lee district, Mingo County.

Danville, Scott district, Boone County.
Dunbar, Union district, Kanawha County.
Dunleigh, Ceredo district, Wayne County.

Eccles, Trap Hill district, Raleigh County.
Elk Garden, Elk district, Mineral County.

Fayetteville, Fayetteville district, Fayette County.
Flatwoods, Flatwoods independent district, Braxton County.
Flemington, Flemington district, Taylor County.
Franklin, Franklin district, Pendleton County.

Hamlin, Carroll district, Lincoln County.
Hundred, Church district, Wetzel County.
Hurricane, Curry district, Putnam County.
Huttonsville, Huttonsville district, Randolph County.

Kermit, Warfield district, Mingo County.

Lewisburg, Lewisburg independent district, Greenbrier County.

Mason, Mason independent district, Mason County.
Mullens, Slab Fork district, Wyoming County.

New Haven, Graham district, Mason County.

Petersburg, Petersburg independent district, Grant County.
Peterstown, Red Sulphur district, Monroe County.
Philippi, Philippi independent district, Barbour County.
Pineville, Center district, Wyoming County.

Renick, Falling Springs district, Greenbrier County.

Spanishburg, Rock district, Mercer County.

Union, Union district, Monroe County.

Walkersville, Collins Settlement district, Lewis County.
Wallace, Sardis district, Harrison County.
West Liberty, Liberty district, Ohio County.
Winding Gulf, Slab Fork district, Raleigh County.
Wyatt, Eagle district, Harrison County.

HIGH SCHOOLS OF THIRD CLASS.

Aurora, Union district, Preston County.

Bayard, Union district, Grant County.
Buffalo, Buffalo district, Putnam County.
Burchfield (P. O. Sincerity), Grant district, Wetzel County.

Elkview, Elk district, Kanawha County.

Fellowsville, Reno district, Preston County.
Frankford, Frankford district, Greenbrier County.
Friendly, Union district, Tyler County.

Great Cacapon, Cacapon district, Morgan County.
Greenville, Springfield district, Monroe County.

Leetown (Kearneysville), Middleway district, Jefferson County.
Lenore, Hardee district, Mingo County.

McGraws, Slab Fork district, Wyoming County.

Oceana, Oceana district, Wyoming County.

Shiloh (P. O. Friendly), Union district, Tyler County.
Simpson, Court House district, Taylor County.

Wardensville, Capon district, Hardy County.

The College of Arts and Sciences

THE FACULTY.

FRANK BUTLER TROTTER, LL.D., *President*

JAMES MORTON CALLAHAN, PH.D., *Dean and Professor of History and Political Science*

DANIEL BOARDMAN PURINTON, LL.D., *President and Professor of Philosophy, Emeritus*

JAMES SCOTT STEWART, B.S., *Professor of Mathematics, Emeritus.*

ROBERT WILLIAM DOUTHAT, PH.D., *Professor of Latin, Emeritus*

ALEXANDER REID WHITEHILL,[1] PH.D., *Professor of Chemistry*

SAMUEL BOARDMAN BROWN, A.M., *Professor of Geology and Mineralogy*

ROBERT ALLEN ARMSTRONG, L.H.D., *Professor of the English Language and Literature*

ALFRED JARRETT HARE, A.M., *Professor of the Latin Language and Literature*

FREDERICK WILSON TRUSCOTT, PH.D., *Professor of Germanic Languages and Literature*

JASPER NEWTON DEAHL, PH.D., *Professor of Education*

JOHN HARRINGTON COX, A.M. *Professor of English Philology*

JOHN ARNDT EIESLAND, PH.D., *Professor of Mathematics*

ALBERT MOORE REESE, PH.D., *Professor of Zoology*

OLIVER PERRY CHITWOOD, PH.D., *Professor of History*

CHAUNCEY WILLIAM WAGGONER, PH.D., *Professor of Physics*

MADISON STATHERS, PH.D., *Professor of Romance Languages*

WAITMAN BARBE, LITT.D., *Professor of English*

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[1]Died, October, 1921.

ENOCH HOWARD VICKERS, A.M., *Professor of Economics and Sociology*

CHARLES EDWARD BISHOP, PH.D., *Professor of the Greek Language and Literature*

JOSEPH ELLIS HODGSON, PH.D., *Professor of Mathematics*

FRIEND EBENEZER CLARK, PH.D., *Professor of Chemistry*

CHARLES BENTON CANNADAY, A.M., *Professor of Latin*

CHARLES HENRY AMBLER, PH.D., *Professor of History*

LORIMER VICTOR CAVINS, A.M., *Professor of Education*

WILBUR JONES KAY, A.M., *Professor of Public Speaking*

CHARLES McKEE CANTRALL, A.M. *Professor of Philosophy and Psychology*

HARLAND HARVEY YORK, PH.D., *Professor of Botany*

DAVID DALE JOHNSON, A.M., *Professor of English*

ARLEIGH LEE DARBY, A.M., *Professor of French and Italian*

CARL ALFRED JACOBSON, PH.D., *Professor of Chemistry*

EARL HUDELSON, A.M., *Professor of Education*

LAWRENCE BENJAMIN HILL, PH.D., *Professor of Education*

SAMUEL MORRIS, PH.D., *Professor of Chemistry*

LONNA DENNIS ARNETT, PH.D., *Librarian and Instructor in Library Science*

FLOYD EARL CHIDESTER, PH.D., *Associate Professor of Zoology*

HUBERT HILL, M.S., *Associate Professor of Chemistry*

GEORGE RUSSELL BANCROFT, PH.D., *Associate Professor of Chemistry*

LOUIS AUGUST RUFENER, PH.D., *Associate Professor of Economics and Sociology*

JOHN LITTLEFIELD TILTON, PH.D., *Associate Professor of Geology*

EARL CLAUDIUS HAMILTON DAVIES, Ph.D., *Associate Professor of Chemistry*

FRED A. MOLBY, Ph.D, *Associate Professor of Physics*

CHESTER PENN HIGBY, Ph.D., *Associate Professor of History*

THOMAS LUTHER HARRIS, Ph.D., *Associate Professor of Sociology*

BENJAMIN WALTER KING, A.M., *Assistant Professor of Economics*

EARL REED SCHEFFEL, Ph.D., *Assistant Professor of Geology*

HARVEY CARSON GRUMBINE, Ph.D., *Assistant Professor of English*

CLAUDE CARL SPIKER, A.M., *Assistant Professor of Romance Languages*

ROBERT CLIFTON SPANGLER, A.M., *Assistant Professor of Botany*

REBECCA LUELLA POLLOCK, A.M., *Assistant Professor of English*

LILY BELL SEFTON, Ph.D., *Assistant Professor of Chemistry*

ENOCH FRANKLIN GEORGE, Ph.D., *Assistant Professor of Physics*

PERLEY ISAAC REED, Ph.D., *Assistant Professor of English*

MARIAN BRECK, M.S., *Assistant Professor of Education and Home Economics*

JOHN E. WINTER, Ph.D., *Assistant Professor of Psychology*

CLARENCE NEWTON REYNOLDS, Jr., Ph.D., *Assistant Professor of Mathematics*

EDMUND DANIELS McGARRY, M.B.A., *Assistant Professor of Economics*

EDGAR WILLIAMS, A.M., *Instructor in English*

CLARA LYTLE, A.B., *Instructor in English*

ELIZABETH DEE FROST, A.M., *Instructor in English*

MORRIS ABEL RAINES, A.M., *Instructor in Botany*

EVA FLING ROUSH, A.M., *Instructor in Botaany*

CHARLES SIMEON MITRANI, M.A., *Instructor in Romance Languages*

MARION MARSH TORREY, A.M., *Instructor in Mathematics*

ALLEN GUY MONTGOMERY, A.M., *Instructor in Mathematics*

CLAIRE FISHER, A.M., *Instructor in Mathematics*

CLEVELAND PENDLETON HICKMAN, A.M., *Instructor in Zoology*

MENDOR THOMAS BRUNETTI, A.M., *Instructor in French*

NELLIE PERREL AMMONS, A.B., *Instructor in Botany*

MARJA BROWN STEADMAN, A.B., *Instructor in Public Speaking*

GERTRUDE MARTIN, A.B., *Instructor in German*

HELEN PURINTON PETTIGREW, A.M., *Instructor in English*

IRA WELLBORN SMITHEY, PH.D., *Instructor in Chemistry*

MONTAGUE FRANK MODDER, B.A., *Instructor in English*

JOHN ANDREW WITHROW, A.B., *Instructor in English*

HYACINTH EUBALD FORREST, PH.D., *Instructor in French and Spanish*

CHARLES LESTER LAZZELL, M.S., *Instructor in Chemistry*

GREEK SAYRE, A.M., *Assistant in History and English*

GEORGE ANDREW FEDERER, JR., A.B., *Assistant in Chemistry*

ORFA REX FORD, B.S., *Assistant in Physics*

CLARENCE DANIEL LUTHER ROPP, A.B., *Assistant in Chemistry*

MARY MARTIN JOHNSON, A.B., *Assistant in Chemistry*

WILLIAM BROWN SHIREY, A.B., *Assistant in Chemistry*

CLESS YELVING FORDYCE, *Student Assistant in Chemistry*

WILLIAM ERNEST ROBERTS, *Student Assistant in Chemistry*

VIRGINIA FRANCES HILEMAN, *Student Assistant in Chemistry*

PAUL JONES DAUGHENBAUGH, *Student Assistant in Chemistry*

GEORGE WASHINGTON PROVE, *Student Assistant in Chemistry*

HAMILTON DAVIS, *Student Assistan in Mathematics*

ARTHUR THOMAS HOPWOOD, *Student Assistant in Zoology*

JOHN ADDAIR, *Student Assistant in Zoology*

CLARENCE F. SCHROEDER, *Student Assistant in Zoology*

ORMAN CRAWFORD CAMPBELL, *Student Assistant in Zoology*

LAURA JOSEPHINE HICKMAN, *Student Assistant in Zoology*

ENTRANCE REQUIREMENTS.

For admission to the College of Arts and Sciences the student must have credit for fifteen units of secondary school work, i. e., the work of a standard four-year high school.

A. The following groups are requird:
   (1) Four units of English.
   (2) Three units in one other subject.
   (3) Two units in a third subject.
   (4) Two units in a fourth subject.
   (5) Four units elective.

B. Work in the following subjects not to exceed the number of units placed after each subject will be accepted:

English	4 units
Foreign Languages[1]	
Latin	4 units
Greek	3 units
French	3 units
German	3 units
Spanish	2 units
Italian	2 units
Mathematics	
Algebra	1½ units
Plane Geometry	1 unit
Solid Geometry	½ unit
Trigonometry	½ unit
History and Economics	
History	3 units
Civics	1 unit
Elementary economics and sociology	1 unit
Education	2 units
Drawing	
Free-hand drawing	1 unit
Mechanical drawing	1 unit
Science[2]	
Physics	1 unit
Chemistry	1 unit
Biology	1 unit
Botany	1 unit
Geology	1 unit
Zoology	1 unit
General Science	1 unit
Physical Geography	½ unit
Physiology	½ unit
Hygiene and sanitation	½ unit
Commercial geography	½ unit
Commercial Law	½ unit
Vocational subjects (not to exceed four units in all.)	
Agriculture	3 units
Household Arts	3 units
Manual training	3 units
Bookkeeping or bookkeeping and commercial arithmetic combined	2 units
Shorthand and typewriting combined	2 units
Music:—violin, organ or piano[3]	2 units

[1]Not less than two units of one foreign language will be accepted for entrance.
[2]A group of two units in science may be made by combining one unit each of physics and chemistry or one unit each of any two of the following: biology, botany, zoology, geology. A group of three units in science may be made by combining one unit each of any three of the following: physics, chemistry, biology, botany, zoology, geology.
[3]For conditions governing credit for music see page 59 of the General Announcements.

REQUIREMENTS FOR DEGREES.

BACCALAUREATE DEGREES.

Only one baccalaureate degree is regularly conferred in the College of Arts and Sciences, that of Bachelor of Arts.

The degree of Bachelor of Science is conferred only as a first degree upon candidates who are pursuing either the combined science and engineering course, the combined science and agricultural course, or the combined scientific and medical course. See page 9.

Amount of Work Required.

The "semester hour" is the standard for computing the amount of work required for graduation in the curricula leading to these degrees. The "hour" represents the amount of work done in one semester (eighteen weeks) in one recitation hour with two preparation hours a week. No student is permitted to register for less than fourteen hours or more than seventeen hours of work in any one semester.

The baccalaureate degree in the College of Arts and Sciences is conferred upon any student who complies with the general regulations of the University concerning degrees as announced on page 39 of the University Catalogue, satisfies all entrance requirements, and secures credit for one hundred and twenty-eight semester hours selected in accordance with the following provisions.

The Major Subject.

At the beginning of the sophomore year the student must select as his major study one of the following subjects:

English	Spanish	Botany
Public Speaking	History	Zoology
Greek	Political Science	Entomology
Latin	Economics	Geology
German	Sociology	Education
French	Physics	Philosophy
Italian	Chemistry	Home Economics
	Mathematics	

The head of the department to which this major subject belongs becomes the student's class officer. The major requirement is 30 hours, which may be either 30 hours in the one major subject or 20 to 25 hours in that subject with 5 to 10 hours in another subject closely related. The class officer may designate the courses to be taken in the major and allied subjects and may require at least 25 hours in the one subject. Additional courses in the major subject

or in the allied subject may of course be taken as elective if the student so desires. The maximum amount of credit allowed in any one subject is 36 hours.

Special Requirements.

For Students Who Desire the Degree of A.B.

During his course each student must take courses in each of eight groups of subjects as shown below:

1. English composition (English 1 and 2).....6 Hrs.
   English literature (English 26 and 27).....4 "
2. One foreign language .....20 "
3. History and political science, or economics and sociology ..... 8 "
4. Physics, chemistry,or mathematics; any one ..... 8 "
5. Botany, zoology, geology or entomology; any one ..... 8 "
6. Education, philosophy, public speaking; any one ..... 8 "
7. Military science (when required) ..... 4 "
8. Electives; not less than .....32 "

   NOTE.—At least five hours must be taken in each subject offered as an elective, except that not more than eight hours of credit in isolated courses of less than five hours credit value each, elected with the approval of the class officer, may be offered.

Students who do not offer two units of language for entrance must do twenty-six hours of one language in college instead of twenty. Fewer than ten hours of one language will not be counted for credit unless the student has offered two units of the same language for entrance.

For Students Who Desire to Take a Combined Course in Two Colleges in Six Years.

Students who desire to secure the B.S. degree and then take a bachelor's degree in the college of Engineering may complete the work for both degrees in six years or less by following the curriculum as outlined in the Announcements of the College of Engineering. Those who desire to secure the B.S. and B.S.Agr. degrees in a similar time must follow the curriculum outlined in the Announcements of the College of Agriculture.

Students who desire to secure the B.S. degree with a view to proceeding to the study of medicine and who announce this intention on entering the freshman class will be excused from the foregoing general requirements and may secure the degree of B.S. by taking sixty-four hours of work in the College of Arts and Sciences and the course in the School of Medicine. For detailed curriculum see Announcements of the School of Medicine.

Courses in Special Fields of Work.

Journalism. The work in journalism is at present organized as part of the department of English. Students who desire to devote special attention to this subject, because they desire either to make it the nucleus of a general education, or to include it as part of their preparation for business or industrial affairs, or to take up some phase of newspaper or editorial work as a career, should consult the head of the department of English and the instructor in charge of the courses in journalism in regard to a program of studies adapted to their needs. Such a program would ordinarily include, in addition to the work in journalism proper, other courses in English literature and composition, courses in modern history and economics and the usual requirements in science and foreign language. Students who desire to specialize in journalism should select English as their major subject at the beginning of the sophomore year.

Business Administration. The University does not as yet offer a special course in business administration. Students who are particularly interested in this field and who wish to prepare themselves for specialization in it should consult with the head of the department of economics in planning their program of studies. The freshmen work of such students should ordinarily include the courses of English and American economic history.

Elective Courses.

The remaining work necessary to make up the total of one hundred and twenty-eight hours required of candidates for the bachelor's degree, may be selected from any of the courses offered in the College of Arts and Scinces. Work not to exceed fifteen hours in the College of Law, the College of Agriculture, the College of Engineering of the School of Music may be included in the list of elective credits offered by students in the College of Arts and Sciences. The total number of hours elected from other colleges shall not, however, exceed twenty-four in all. For detailed statements of the courses open to such election in each college, see the announcements of that college.

Classification of Students.

To be classified as a freshman in the College of Arts and Sciences a student must have credit for at least fifteen units of entrance requirements; to be classified as a sophomore he must have fulfilled all entrance requirements and have credit for twenty-five hours of college work; as a junior, fiifty-eight hours; as a senior, ninety-two hours.

Graduate Degrees.

There are two advanced degrees conferred in the College of Arts and Sciences: Master of Arts and Master of Science. For the conditions upon which these degrees are granted see page 41 of the catalogue.

EXTENSION COURSES.

As a part of the University Extension Service The College of Arts and Sciences since the year 1916 has conducted at several centers in various parts of the State extension courses for which regular college credit has been given. The extension instructors have had headquarters at Moundsville, Parkersburg, and Wheeling. The work given in the extension courses corresponds in every particular, as to class requirements and credit, with that given in similar courses on the campus. Similar extension courses will be provided in other parts of the State as the resources of the University will permit.

The giving of extension courses is subject to the following conditions: (1) Courses will not be organized at any place unless the demand is sufficient to justify it. (2) Courses offered by resident instructors will be given in Morgantown and in nearby places easy of access, generally on Friday afternoons and Saturdays. (3) Regular extension instructors will offer courses only in such places as can be reached from their headquarters.

COURSES OF INSTRUCTION

Courses marked (G) are primarily for graduate students. Those marked (†) are open to graduates.

BOTANY.

Professor York, Assisant Professor Spangler, Mrs. Roush, Miss Ammons and Mr. Raines.

The courses in botany are designed to meet the needs of four classes of students:

(1) Those who wish to learn something about the nature of plants and their relation to every day life. Courses 20, 21, 12, 24, 25, 26, and 27 are recommended.

(2) Those who plan to return to the farm or become closely affiliated with some phase of applied botany. Courses 20, 21, 12, 14, 15, 24, 29 and Bacteriology 10 are recommended.

(3) Those who intend to teach botany or agriculture in secondary schools. Courses 20, 21, 24, 5, 26, 27, 28, and Bacteriology 10 are recommended.

(4) Those who wish to engage later in graduate study preparatory to the pursuit of investigational work in the U. S. Department of Agriculture or in experiment stations, or to become college teachers. Courses 20, 21, 22, 23, 13, 14, 15, 16, 26, 27, 5, and Bacteriology 10 are recommended.

NOTE: For description of botanical laboratory see Catalogue, page 26.

NOTE: Courses 1 and 2 are prerequisite for all other courses in botany except Courses 5 and 24 and Bacteriology 10.

1. General Botany. (4 Hrs.) Plant Biology. A general cultural course which also affords a preliminary training for those who wish to take up further work in pure and applied botany. A general survey of the plant kingdom. The plants studied serve as a basis for the study of the general biological principles fundamentally related to human welfare. Two lecture periods and two three-hour laboratory periods each week.

First semester; M. F. T. Th., 8:00; M. W., 9:00; M. T. W. Th. F., 2:00; S., 9:00. Professor York and staff; O.

2. General Botany. (4 Hrs.) Plant Biology. A continuation of Course 1. A collection of fifty plants is required. Lecture and laboratory hours and sections as in Course 1.

Second Semester; Professor York and staff.

20. Physiological Anatomy. (4 Hrs.) A study of the place and mode of origin, minute structure and function of the tissues in flowering plants; methods in microtechnique. Two lecture periods and two three-hour laboratory periods weekly.

First semester; M. F., 10:00; Th. F., 2:00; Professor York.

21. **Physiological Anatomy.** (4 Hrs.) Continuation of Course 20.

Second semester; M. F., 10:00; Th. F., 2:00; Professor YORK.

12. **Plant Physiology.** (5 Hrs.) The fundamental principles underlying the nutrition, growth, and responses of the plant and the relation of the plant to its environment, studied from the point of view of plant control and plant production. Prerequisite: Course 20. Three lecture periods and two three-hour laboratory periods each week.

First semester; M. W. F., 11:00; M. W., 2:00; Mr. RAINES.

16. **Advanced Physiology.** (2 Hrs.) A study of the response of the plant to external stiumli. Prerequisite: Course 12. Six hours' work in the laboratory each week.

Second semester; hours to be arranged; Mr. RAINES.

14. **Plant Pathology.** (5 Hrs.) The symptoms of disease in plants; identification of bacteria and fungi which cause disease in our most common native and introduced plants; their manner of infection and their effects on their hosts; methods of prevention and control. Prerequisite: Course 12. Two lecture periods and two three-hour laboratory periods each week.

Second semester; M. W., 11:00; M. W., 2:00; Professor YORK.

15. **Plant Pathology.** (5 Hrs.) Diseases of shade, ornamental, and forest trees; methods of culture and inoculation employed in the laboratory in connection with the study of plant diseases. Prerequisite: Course 14. Two lecture periods and nine hours in the laboratory each week.

First semester; lectures T. Th., 4:00; laboratory hours to be arranged; Professor YORK and staff.

22. **Morphology and Phylogeny.** (4 Hrs.) Morphology of the thalophytes and bryophytes.

First semester; lectures, W. S., 8:00; laboratory hours to be arranged; Assistant Professor SPANGLER.

23. **Morphology and Phylogeny.** (4 Hrs.) A continuation of Course 22. Study of pteridophytes and spermatophytes.

Second semester; lectures, W. S., 8:00; laboratory hours to be arranged; Assistant Professor SPANGLER.

24. **Trees.** (2 Hrs.) The more common native and introduced trees of West Virginia; their structure and economic value; the mak-

ing of seed-beds; transplant beds and forest tree plantings. The laboratory work is done largely in the field.

Second semester; lectures, W., 8:00; laboratory hours to be arranged; Professor York.

5. **Systematic Botany.** (3 Hrs.) A study of ferns and seed plants primarily from the standpoint of identification and classification with the aid of a manual. Both wild plants of this region and those of economic importance are considered. A collection is required. After April 1 most of the class work is done in the field.

Second semester; M. W. F., 4:00; Professor York and Mrs. Roush.

6. **Pharmaceutical Botany.** (6 Hrs.) This course is designed primarily for those who wish to specialize in pharmacy. Three lecture periods and three three-hour laboratory periods each week.

First semester; M. W. F., 11:00; T. Th. S., 9-12; Professor York and staff.

7. **Pharmaceutical Botany.** (2 Hrs.) Continuation of Course 6.

Second semester; M. W. F., 4:00; Professor York and staff.

Bacteriology.

10. **Bacteriology.** (3 Hrs.) The nature of bacteria; what they are, how they live; methods of growing and studying them. Two lecture periods and one three-hour laboratory period each week.

First and second semesters; lectures, T. Th., 11:00; laboratory, T. or Th., 2:00; Assistant Professor Spangler.

Graduate Courses.

The following courses are designed for graduates and approved seniors. Students desiring to elect any of these courses should first consult with the head of the department of botany.

25. (G) **Fungi.** (3-5 Hrs.) Methods of culture, isolation, identification and inoculation of fungi.

First semester; lectures T. Th., 11:00; laboratory hours to be arranged; Professor York and staff.

66. (G) **Fungi.** (3-5 Hrs.) A continuation of course 25.

Second semester; lectures, T. Th., 11:00; laboratory hours to be arranged; Professor York and staff.

27. (G) **Plant Growth.** (3-5 Hrs.) Spcial work in plant growth and reproduction.

First semester; lectures, M. F., 4:00; laboratory hours to be arranged; Professor York and staff.

28. (G) **Plant Growth.** (3-5 Hrs.) A continuation of course 27.

Second semester; lectures, M. F., 4:00; laboratory hours to be arranged; Professor YORK and staff.

29. (G) **Plant Anatomy.** (3-5 Hrs.) Special work in the anatomy of seed plants.

First semester; W. S., laboratory hours to be arranged; Professor YORK and staff.

30. (G) **Plant Anatomy.** (3-5 Hrs.) A continuation of 29.

Second semester; W. S., laboratory hours to be arranged; Professor YORK and staff.

CHEMISTRY.

Professors CLARK, JACOBSON, and MORRIS, Associate Professors. HUBERT HILL, BANCROFT, and DAVIES, Assistant Professor SEFTON, Mr. SMITHEY and Mr. LAZZELL.

NOTE: One unit of algebra and one unit of plane geometry are prerequisite for all courses in chemistry except Courses 1 and 2. Courses 1 and 2 are prerequisite to all other courses in chemistry. Courses 5, 6, 7, 9, and 24 are required of all students whose major is chemistry or chemical engineering.

1. **Inorganic Chemistry.** (4 Hrs.) Primarily for freshmen in all the colleges. Three recitation periods and two two-hour laboratory periods weekly.

Section A, for students who offer chemistry for entrance credit.

Section B, for students who do not offer chemistry for entrance credit.

Section C, for students who offer neither chemistry or high school mathematics for entrance credit.

First semester; hours as announced in the semester schedule; Professor CLARK and staff.

2. **Inorganic Chemistry.** (4 Hrs.) A continuation of Course 1. Sections and recitation hours as in Course 1.

Second semester; hours as announced in the semester schedule; Professor CLARK and staff.

5. **Qualitative Analysis and Inorganic Preparations.** (4 Hrs.) Required of students whose major is chemistry and of students in chemical engineering. Three three-hour laboratory periods weekly with occasional recitations and assignment in addition.

First semester; M. W. F., 2:00; Associate Professor HILL. 37 S.

4. **Quantitative Analysis.** (2 Hrs.) Primarily for engineering students. Two three-hour laboratory periods weekly.

First semester; hours as shown in semester schedule; Associate Professors HUBERT HILL and DAVIES. 2 and 37 S.

6. **Quantitative Analysis.** (4 or 5 Hrs.) Required of students whose major is chemistry, and of students in chemical and mining engineering. Students registered for the coal mining option will take only four hours' credit. Prerequisite course 5. Four or five three-hour laboratory periods weekly.

Second semester; 2:00; Associate Professor HUBERT HILL. 37 S.

7. **Quantitative Analysis.** (4 Hrs.) A continuation of Course 6. Required of students whose major is chemistry and of students in chemical engineering. Prerequisites: Physics 1, 2, 3, and 4; Mathematics 3 and 4. Four three-hour laboratory periods weekly.

First semester; M. T. Th. F., 2:00; Professor JACOBSON. 35 S.

8. **Quantitative Analysis.** (5 Hrs.) An advanced course for major students. Prerequisite: Course 7. Five three-hour laboratory periods weekly.

Second semester; 2:00; Professor JACOBSON. 35 S.

18. **Quantitative Analysis.** (3 Hrs.) For students in pre-medical courses. Three three-hour laboratory periods each week.

First semester; M. W. F., 9:00; Associate Professor HILL. 37 S.

33. **Qualitative and Quantitative Analysis.** (5 Hrs.) For pharmacy students.

First semester; 9:00-12:00; Associate Professor HILL. 37 S.

11. **Synthetic Inorganic Chemistry.** (3 Hrs.) Prerequisite: Chemistry 7. An advanced course for juniors, seniors, and graduate students. One lecture and two three-hour laboratory periods.

First semester; hours to be arranged; Professor MORRIS. 35 S.

13.† **Quantitative Analysis.** (3 Hrs.) Prerequisites: Chemistry 20, 7. Open only to seniors and graduate students. Special topics in advanced analytical chemistry. One lecture and two three-hour laboratory periods.

Second semester; hours to be arranged; Professor MORRIS. 35 S.

14.† **Organic Qualitative Analysis.** (2 Hrs.) The applications of analytical principles to organic compounds. Open only to seniors and graduate students. Prerequisite: Course 9. Two three-hour laboratory periods weekly.

Second semester; M. F.; Professor JACOBSON. 35 S.

23.† **Organic Quantitative Analysis.** (2 Hrs.) A laboratory course for both proximate and ultimate analysis of carbon compounds. Open only to seniors and graduate students. Prerequisite or parallel course: Chemistry 20. Two three-hour laboratory periods weekly.

Second semester; W. S., 8:00-11:00; Associate Professor BANCROFT.

Organic Chemistry.

3. **Organic Chemistry.** (2 Hrs.) An introductory course. Prerequisite: Chemistry 1. Experimental lectures and recitations.

Second semester; T. Th., 9:00; Mr. SMITHEY. 11 S.

16. **Organic Chemistry.** (3 Hrs.) For students in agriculture and home economics. Two recitations and one three-hour laboratory period weekly. Prerequisite: Chemistry 2.

First semester; T. Th., 9:00; W. or F., 2:00; Associate Professor BANCROFT. 11 S.

9. **Organic Chemistry.** (5 Hrs.) Required of students with major in chemistry, of students in chemical and in mining engineering, and of pre-medical and pharmacy students. The course may count also as graduate work. Three lectures and two three-hour laboratory periods weekly. Prerequisite: Course 7; for medical students, course 18.

First semester, (for major students and for engineering students); M. W. F., 11:00; T. Th., 2:00; Professor CLARK and Associate Professor BANCROFT.

Second semester, (for pre-medical and pharmacy students); M. W. F., 11:00; T. Th., 2:00; Professor CLARK and Associate Professor BANCROFT. 11 S.

20.† **Organic Chemistry.** (5 Hrs.) Open for seniors and graduate students. Two lectures and three three-hour laboratory periods weekly. Prerequisite: Chemistry 9.

Second semester; T. Th., 11:00; M. W. F., 2:00; Professor CLARK and Associate Professor BANCROFT. 11 S.

24. **(G) Dyes and Dye Intermediates.** (2 or 4 Hrs.) Open only to graduate students. Prerequisite: Chemistry 20.

First semester; T. Th., 9:00; laboratory T. Th., 2:00-5:00; Professor CLARK. 11 S.

25. **(G) Dyes and Dye Intermediates.** (2 or 4 Hrs.) Open only to graduate students. Prerequisite: Chemistry 24.

Second semester; lectures, 9:00; laboratory T. Th., 2:00-5:00; Professor CLARK. 11 S.

Industrial Chemistry.

19.† Industrial Inorganic Chemistry. (3 or 4 Hrs.) Prerequisites Chemistry 7 and 9. Open to seniors and graduate students.

First semester; for major students in chemistry, 9:00; for chemical engineers, W. F., 9:00; T. Th., 2:00; Professor JACOBSON and Professor HODGE.

22.† Industrial Organic Chemistry. (3 or 4 Hrs.) Prerequisite: Chemistry 19. Open to seniors and graduate students.

Second semester; M. W. F., 9:00; Professor CLARK and Professor HODGE. 11 S.

Physical Chemistry.

24.† Physical Chemistry. (5 Hrs.) Required of chemistry and chemical engineering students. Open to graduate students. Prerequisites: Chemistry 7 and Physics 4. Three lectures and two three-hour laboratory periods weekly.

Second semester; M. W. F., 9:00; T. Th., 2:00; Associate Professor DAVIES. 1 S.

26.† The Chemistry of Colloids. (2 Hrs.) Open to juniors, seniors and graduate students. Specially recommended to medical students. Prerequisites: Course 9 and Course 18 or 6.

First semester; T. Th., 8:00; Associate Professor DAVIES. 1 S.

Research.

27. (G) Research. (Credits as arranged). Primarily for graduate students.

First semester; hours to be arranged; Chemistry Staff.

28. (G) Research. (Credits as arranged). Primarily for graduate students.

Second semester; hours to be arranged; Chemistry Staff.

15. Special Work. Assignments not covered by the courses above outlined. Credits and hours to be arranged by individual students.

29. Journal Meeting and Seminar. (1 Hr.) Open to seniors and graduate students.

30. Journal Meeting and Seminar. (1 Hr.) Prerequisite: Chemistry 29. Open to seniors and graduate students.

Second semester; 7:00 P. M., Professor CLARK and staff.

31.† History of Chemistry. (2 Hrs.) Open to juniors, seniors and graduate students.

Second semester; T. Th., 9:00; Associate Professor HILL.

NOTE—A breakage deposit is required of all students taking laboratory courses.

ECONOMICS, SOCIOLOGY AND BUSINESS ADMINISTRATION.

Professor VICKERS, Associate Professor RUFENER, Associate Professor HARRIS, Assistant Professor KING, and Assistant Professor MCGARRY.

Economics 1 and 2 will be helpful to students in all other courses in the department, and are specified prerequisites for entrance to most of these courses. Economics 9 and 24 may be taken by freshmen, and they have no prerequisites. With the exception of these two courses, Economics 1 and 2 should be taken first by all students who contemplate further work in economics and sociology. Courses in sociology should be deferred till the sophomore year. Sociology 1 is a prerequisite for all other courses in sociology except 6, 8, 10.

Any student who elects economics or sociology as major subject must take at least 25 hours of work in this department, at least 6 hours in history and politics, and should take at least 4 hours in either zoology or botany in order to qualify as a candidate for a degree. In anticipation of such election, freshmen are urged as far as practicable to meet requirements in English, foreign language and science groups during their freshman year. Economics 1 and 2 may with advantage to the student be deferred until the second, or sophomore year.

Economics.

1. **Principles of Economics.** (3 Hrs.) A general course on fundamental principles governing consumption, production, distribution and exchange of wealth. Designed to be followed by Economics 2. For sophomores; freshmen by consent.

First semester; first section, M. W. F., 8:00; second section, M. W. F., 9:00; third section, M. W. F., 10:00; fourth section, M. W. F., 11:00; Professor VICKERS, 42 W., and Associate Professor RUFENER. 44 W.

2. **Principles of Economics.** (3 Hrs.) Continuation of preceding course. Prerequisite: Economics 1.

Second semester; first section, M. W. F., 8:00; second section, M. W. F., 9:00; third section; M. W. F., 10:00; fourth section, M. W. F., 11:00; Professor VICKERS, 42 W., Associate Professor RUFENER, 44 W.

115. **Principles of Economics.** (3 Hrs.) A general course on fundamental principles which govern the consumption, production, distribution and exchange of wealth. For students in the College of Engineering.

First semester; first section, T. Th. S., 8:00; Associate Professor RUFENER, 44 W.; second section, M. W. F., 11:00; Assistant Professor KING. 44 W.

3. **History of Economic Thought.** (2 Hrs.) For juniors and seniors; graduates by consent. Development of economic theories.

Causes, nature and effects of changes; relation to economic and political institutions. Prerequisites: Economics 1 and 2.

First semester; T. Th., 9:00; Professor Vickers, 42 W.

14.† **Distribution of Wealth.** (2 Hrs.) For seniors and graduates. The actual apportionment of wealth among the several classes of society; effects of competition, monopoly, combinations of capital and labor, government regulation. Prerequisites: Economics 1, 2 and 3.

First semester; T. Th., 8:00; Professor Vickers, 42 W.

4.† **Relations of Government to Economic Enterprise.** (2 Hrs.) For seniors and graduates, juniors by consent. Functions of government, both state and municipal, in relation to economic enterprises; principles and expediency of government regulation and of government ownership; methods and results of typical enterprises. Prerequisite: Consent of instructor.

Second semester; T. Th., 9:00; Professor Vickers, 42 W.

5. **Money, Credit and Banking.** (3 Hrs.) For juniors and seniors, Nature and functions of money and of credit; functions of banks and principles of banking as revealed in the banking systems of leading countries. Special reference to the United States. Prerequisite: Economics 1 and 2.

First semester; M. W. F., 9:00; Professor Vickers, 42 W.

105. **Money, Credit and Banking.** (2 Hrs.) For students in the College of Engineering. Nature and functions of money, credit and securities; principles of banking; financing of public service and industrial corporations, with special reference to engineering and construction work. Prerequisite: Economics 115.

Second semester; first section, T. Th., 8:00; Assistant Professor King; second section, T. Th., 11:00; Associate Professor Rufener.

6. **Public Finance.** (4 Hrs.) For juniors and seniors. Principles governing expenditures of modern governments; sources of revenue; uses of public credit; principles and methods of taxation and of financial administration as revealed in fiscal systems of leading countries. Prerequisite: Economocs 1 and 2.

Second semester; M. T. Th. F., 10:00; Professor Vickers, 42 W.

7. **Transportation.** (3 Hrs.) For juniors and seniors. Nature, history and problems of transportation, especially in the United States. Prerequisites: Economics 1 and 2.

Second semester; M. W. F., 8:00; Assistant Professor King, 44 W.

10. International Trade Policies. (3 Hrs.) For juniors and seniors. Nature and advantages of trade between nations; agencies, facilities, restrictions; protective and revenue tariffs in theory and in practice of leading nations. Special reference to the United States. Prerequisite: Economics 1 and 2.

First semester; T. Th., 11:00; a third hour to be arranged; Professor VICKERS, 42 W.

11. Labor Problems. (3 Hrs.) For juniors and seniors. Origin and nature ,methods of amelioration and reform; woman and child labor, sweating, immigration, unemployment, labor legislation, arbitration; cooperation, profit-sharing, and insurance. Prerequisite: Economics 1 and 2.

Second semester; M. W. F., 11:00; Professor VICKERS, 42 W.

17. Business Organization. (2 Hrs.) For juniors and seniors. Forms of business organization and their development; individual enterprise, partnership, corporation, combination; resulting problems and requisite public policy. Prerequisite: Economics 1 and 2.

First semester; T. Th., 10:00; Associate Professor RUFFNER, 45 W.

20. Corporation Finance. (2 Hrs.) For juniors and seniors. Financing business corporations; classes of securities; promotion, underwriting, reorganization, resulting problems of business and of public policy. Prerequisite: Economics 1 and 2.

Second semester; T. Th., 8:00; Associate Professor RUFENER, 45 W.

21. Investment and Speculation. (2 Hrs.) For juniors and seniors; graduates by consent. Investment analysis; stocks, bonds, mortgages, real estate; stock exchanges; factors affecting the price of securities. Prerequisites: Economics 1 and 2, and 5, 17, or 20. (Omitted 1922-23).

Second semester; T. Th., 8:00; Associate Professor RUFENER, 44 W.

22. Insurance. (2 Hrs.) Insurance in its fundamental aspects; history; principles and their main applications; life, casualty, health, fire, marine and other hazards. (Omitted 1921-22).

First semester; M. F., 10:00; Assistant Professor KING, 44 W.

23. Exchange. (2 Hrs.) A study of domestic and foreign exchange with special emphasis on the latter; principles involved; methods of payment; rates; gold shipments; effect of investment, borrowing, speculation and arbitrage. (Omitted 1922-23).

Second semester; T. Th., 11:00; Assistant Professor KING, 44 W.

24. **Materials of Commerce.** (3 Hrs.) For freshmen and sophomores. Physical, economic, and political conditions determining the location of industries; comparative study of the leading industries of the United States and of foreign countries.

Second semester; M. F. W., 8:00; Associate Professor Rufener, 44 W.

9. **History of Commerce.** (3 Hrs.) For freshmen and sophomores. Nature and methods of trade among the ancients. Results of maritime discoveries, change of routes, international treaties, inventions, government regulation and trade promoting agencies. (Omitted 1922-23).

First semester; M. W. F., 10:00; Assistant Professor King, 44 W.

13. **Natural Resources of the United States.** (3 Hrs.) For freshmen and sophomores. Exploitation and conservation of natural resources; soils, minerals, forests, marine products, relation to distribution and activities of the people and to national development.

Second semester; M. W. F., 8:00; Associate Professor Rufener.

25. **Principles of Accounting.** (3 Hrs.) For freshmen and sophomores. An introduction to accounting, including construction and interpretation of financial statements and analysis of financial transactions.

First semester; T. Th., 9:00; W., 2:00-4:00; Assistant Professor King, 1 W.

26. **Principles of Accounting.** (3 Hrs.) Continuation of Economics 25. For freshmen and sophomores.

Second semester; T. Th., 9:00; Th., 2:00-4:00; Assistant Professor King, 1 W.

27. **Industrial Accounting.** (3 Hrs.) For juniors and seniors. The principles of cost accounting as applied to the various types of industrial enterprises. Prerequisite: Economics 25.

First semester; T. Th., 10:00; M., 2:00-4:00; Assistant Professor King, 1 W.

28. **Advanced Accounting.** (3 Hrs.) Designed to follow Economics 26. A more intensive study of accounting theory, with its practical application. Prerequisite: Economics 25 and 26.

First semester; T. Th., 10:00; M., 2:00-4:00; Assistant Professor King, 1 W.

29. **Accounting Problems.** (3 Hrs.) Designed to follow Economics 28.

Second semester; T. Th., 10:00; Th., 2:00-4:00; Assistant Professor KING, 1 W.

125. **Cost Accounting.** (2 Hrs.) For seniors in the College of Engineering. A study of the principles and methods of cost accounting with special reference to needs of the engineer.

Second semester; first section, M., 10:00; W. 2:00-5:00; second section, F., 10:00; M., 2:00-5:00; Assistant Professor KING, 1 W.

40. **Marketing Methods.** (3 Hrs.) For juniors and seniors. Marketing raw materials and farm products; analysis of the commodity, the market, and the trade organization; assembling, grading, storing, and moving of commodities; organized exchanges; trade information. Prerequisite: Economics 1 and 2.

First semester; T. Th. S., 8:00; Assistant Professor MCGARRY.

41. **Marketing Problems.** (3 Hrs.) For juniors and seniors. Marketing problems primarily in connection with manufactured products; the distributive system, its functions and tendencies; "new type" retailers; business policies; sales organization; merchandising costs and prices. Prerequisite: Economics 1 and 2.

Second semester; T. Th. S., 8:00; Assistant Professor MCGARRY.

42. **Retail Store Management.** (3 Hrs.) For juniors and seniors. Store location; buying and control of purchases; stock arrangement; window display; stock turnover and its influence on cost price and profits; training of salesmen. Prerequisite: Economics 1 and 2.

First semester; M. W. F., 10:00; Assistant Professor MCGARRY.

44. **Advertising.** (3 Hrs.) For juniors and seniors. Advertising from the viewpoint of the executive; its place in the distributive system; psychology of advertising; trade-marks; advertising and selling campaigns; a general survey of the various departments of advertising work. Prerequisite: Economics 1, 2, and 41. (Omitted 1922-23).

First semester; M. W. F., 10:00; Assistant Professor MCGARRY.

46. **Business Law.** (3 Hrs.) For juniors and seniors. Formation, assignment, performance, and discharge of business contracts; transfer of property by way of sale, and by way of security for debt; the law relating to negotiable instruments. Prerequisite: Economics 1 and 2.

First semester; T. Th., 11:00; a third hour to be arranged; Assistant Professor MCGARRY.

47. **Business Law.** (3 Hrs.) For juniors and seniors. Agency rights, duties, and obligations of agent, principal, and third party; partnerships—formation, management, and dissolution; corporations—formation and management, rights, powers, and liabilities of officers, directors, and stockholders. Prerequisite: Economics 1, 2, and 46.

Second semester; T. Th., 11:00; a third hour to be arranged; Assistant Professor McGARRY.

48. **Business Problems.** (3 Hrs.) For seniors. Problems of organization, production, finance, and marketing analyzed from the viewpoint of the executive. Written reports required at regular intervals. Prerequisite: Economics 1, 2, 17, 25, and 41.

Second semester; M. W. F., 10:00; Assistant Professor McGARRY.

50. **Business Statistics.** (3 Hrs.) For juniors and seniors. Selection and analysis of data, graphic presentation of results, including diagrams, maps, and curves. Application and interpretation of statistics with regard to business and economic problems. Prerequisite: Economics 1 and 2. (Omitted 1922-23).

Second semester; M. W. F., 9:00; Assistant Professor McGARRY.

52. **Business Management.** (3 Hrs.) For juniors and seniors. The internal organization and administration of a business enterprise; coordination of men and departments for efficiency in operation; establishment and maintenance of standards and policies. Prerequisite: Economics 1, 2, 17, and 25.

First semester; M. W. F., 11:00; Assistant Professor McGARRY.

53. **Industrial Management.** (3 Hrs.) For juniors and seniors. The scientific management of industrial enterprise with particular reference to factory organization. The control of materials, equipment, and personnel. The class is taken to a large industrial center to inspect a system of scientific management in operation. Prerequisite: Economics 1, 2, 17, 25, and 52.

Second semester; M. W. F., 9:00; Assistant Professor McGARRY.

Sociology.

NOTE: Courses in sociology are not ordinarily open to freshmen.

1. **Elements of Sociology.** (3 Hrs.) For sophomores and juniors. Not open to freshmen. A general outline of sociological doctrines with special emphasis on the origin and development of social institutions.

First semester; M. W. F., 10:00; Assistant Professor HARTMAN.

11. Applied Sociology. (3 Hrs.) For sophomores and juniors. Continuation of preceding course with emphasis on the application of the laws and principles of social organization and development to problems of social improvement. Prerequisite: Sociology 1.

Second semester; M. W. F., 10:00; Assistant Professor HARTMAN.

2. Social Organization. (3 Hrs.) For seniors and graduates; juniors by consent. Laws and principles underlying individual and social behavior; scope and methods of social control. Prerequisite: Sociology 1 and 11.

First semester, M. W. F., 8:00; Assistant Professor HARTMAN.

3. The Family. (3 Hrs.) For sophomores and juniors. Sex in society; origin, functions, and evolution of the family as an institution; problems connected with divorce, desertion, and family rehabilitation. Prerequisite: Sociology 1.

Second semester; M. W. F., 9:00; Assistant Professor HARTMAN.

4. Theories of Social Progress. (3 Hrs.) For seniors and graduates; juniors by consent. A critical and constructive study of the leading theories of social progress. Prerequisite: Sociology 1 and 11.

Second semester; M. W. F., 8:00; Assistant Professor HARTMAN.

6. Statistics. (3 Hrs.) The principles of statistics as a method of recording and presenting social and economic facts, with application to concrete problems. Prerequisite: Economics 1, 2. (Omitted 1922-23).

First semester; T. Th., 11:00; two-hour laboratory period to be arranged. ——— ———.

7.† Social Investigation. (3 Hrs.) For seniors and graduate students. Research and field work along selected lines of investigation. Prerequisite: Sociology 1 and 11, or the consent of the instructor.

Second semester; one hour weekly, to be arranged, and not less than six hours of investigation; Assistant Professor HARTMAN.

8. Problems of Child Welfare. (2 Hrs.) For sophomores and juniors. Heritage of the child health, home conditions, play, training, work; defective, dependent and delinquent children; institutions and movements for child saving. Prerequisite: Sociology 1.

Second semester; T. Th., 9:00; Assistant Professor HARTMAN.

9. Race Problems. (2 Hrs.) For juniors and seniors. History, causes and effects of immigration; methods of assimilation. The negro problem. Prerequisite: Sociology 1.

First semester; T. Th., 9:00; Assistant Professor HARTMAN.

10. Rural Sociology. (3 Hrs.) For sophomores and juniors. A broad survey of the field of rural life in its social aspects; methods of improvement.

First semester; M. W. F., 11:00; Assistant Professor Hartman.

12. Crime and Punishment. (2 Hrs.) For juniors and seniors. Theories and history of crime and punishment; causes of crime; modern methods of correction and prevention. Prerequisite: Sociology 1.

First semester; T. Th., 10:00; Assistant Professor Hartman.

13. Scientific Philanthropy. (2 Hrs.) For sophomores and juniors. Causes, amelioration and prevention of poverty; philanthropic institutions, their scope, management, control, inspection. Prerequisite: Sociology 1.

Second semester; T. Th., 10:00; Assistant Professor Hartman.

Rural Economics.

For courses in rural economics see Announcements of the College of Agriculture.

EDUCATION.

Professors Deahl, Cavins, L. B. Hill, Hudelson, and Maclin, Associate Professor Humphreys, and Miss Breck.

The courses offered in this department aim to contribute to the educational influence and to the professional efficiency of the schools of the state in the following ways: (1) To interest those students who study the science of education as a part of their general education. (2) To afford students who wish to teach for a time after graduation the means of professional training commensurate with their academic training. (3) To furnish appropriate professional education to students, and to any experienced teachers of suitable age and attainments, who may desire to fit themselves to be teachers, principals, or superintendents of schools.

Students who take education as their major and who expect to do administrative and supervisory school work should take college courses representing a wide range of subjects taught in the public schools.

Those who are preparing to teach academic subjects should fit themselves to give instruction in as many as three subjects.

All students whose major is education should so plan their work that the afternoons in their senior year may be open for practice teaching, or for supervisory work, or for experimental work in education.

NOTE—Courses in Education are open only to juniors, seniors, or graduate students, except that Education 17 and 34 are open to freshmen and sophomores, and Education 12 is open to sophomores.

NOTE—For description of laboratory equipment in education and psychology, see Catalogue, page 26.

History of Education.

1. **History of Education.** (2 Hrs.) A brief study of early European education and of the middle ages; the forces in civilization that help and that hinder in the development of the school as an institution; the changing meaning of education due to the renaissance, the reformation, and the rise of science and of the scientific method of study; the development of logic, psychology, sociology, and the doctrine of evolution in their influence on education and on human freedom.

First semester; T. Th., 8:00; Professor HILL, 17 W.

2. **History of Education.** (2 Hrs.) The purpose of the course is to enable the student to get a clear notion of how the American school has grown up and to apprehend what forces in society and what principles of education should direct American schools in the present and in the future.

Second semester; T. Th., 8:00; Professor HILL.

8. **Seminar in Foreign School Systems.** (2 Hrs.) Open to seniors and graduates.

Second semester; T. Th., 11:00; Professor HILL, 17 W.

9. **Seminar in British and American School Systems.** (3 Hrs.) Open to seniors and graduates.

First semester; M. W. F., 8:00; Professor HILL, 17 W.

NOTE—Courses 8 and 9 will not be given unless the number of students desiring them is considered sufficient by the instructor in charge.

Philosophy of Education.

4. **Philosophy of Education.** (3 Hrs.) This course is a study of the priciples of education that should obtain in a democracy. The meaning of education in individual development and in social efficiency, a correct education theory and a consistent education doctrine, such as a changing and developing civilization requires, are emphasized. The nature of experience in its relation to thinking, method, subject-matter, and the mind in its making is pointed out.

First semester; M. W. F., 11:00; Professor DEAHL, 17 W.

5. **Educational Sociology.** (3 Hrs.) In this course the school is studied as social, civic, and vocational institution. The principles of sociology as applied to the organization, supervision, program of studies, learning, and teaching in the school are examined and interpreted. The extension of the school—continuation, night, and

part time schools, boys' and girls' clubs, school projects, vocational guidance, and similar topics—as a community need is pointed out.

Second semester; M. W. F., 11:00; Professor Deahl, 17 W.

Administration and Supervision.

6. School Administration and Supervision. (2 Hrs.) Open to seniors and graduate students. A study of schools and school systems, organization and control of schools, school plant and equipment, preparation and function of principals and superintendents, selection and tenure of teachers, teaching corps and supervision of teachers, retardation and acceleration of pupils.

First semester; T. Th., 11:00; Professor Deahl, 17 W.

7. School Administration and Supervision. (3 Hrs.) Open to seniors and graduate students. This course makes a study of scientific management as applied to school administration and supervision. School surveys, measurement of school products, tests of teaching, efficiency and supervisory control of learning and teaching.

Second semester; T. Th., 4:00; Professor Cavins, 16 W.

11.† Supervision of Learning and Teaching. (3 Hrs.) Open to seniors and graduate students who have had Education 10 or its equivalent. Primarily for those preparing to teach education or to become supervisors, principals, or superintendents. An intensive study of learning and teaching is made from the point of view of the one who supervises and directs the learning and the teaching. Directed observation of teaching, lesson planning, teaching, and supervising teaching, are exemplified with class work.

Second semester; M. W. F., 9:00; Professor Deahl, 17 W.

15. District Supervision. (2 or 3 Hrs.) For district and county superintendents and those preparing for such positions. The function of the rural school; the programs of studies suited to country life; the preparation of teachers; the characteristics of economic learning and successful teaching; the duties and opportunities of district supervisors; and the relations of the rural school to other agencies of education.

Second semester; T. Th., 11:00; Professor Deahl, 17 W.

13. The Elementary School Curriculum. (3 Hrs.) The traditional elementary school studies are examined in the light of the purpose of the elementary school. A new program of studies is proposed more nearly in harmony with the wholesome normal activities of the child life. The course also attempts to show how the fundamentals may be acquired through the proposed new curriculum.

First semester; M. W. F., 8:00; Professor Cavins, 17 W.

Educational Psychology.

12. Educational Psychology. (3 Hrs.) An introductory course in educational psychology open only to freshmen and suphomores who have had no elementary psychology. This course will use textbooks but the problems of behavior as a whole will be studied experimentally to find the laws of learning in study. The beginning, development, and function of knowledge will be illustrated and interpreted from the psychological and logical bases of learning.

Second semester; M. W. F., 10:00; Professor DEAHL, 17 W.

23. Educational Psychology. (3 Hrs.) An advanced course in educational psychology open to junior, senior, and graduate students.

First semester; M. W. F., 9:00; Professor HILL, 17 W.

Principles of Learning and Teaching.

10. The Principles of Teaching. (3 Hrs.) Required of all students who are candidates for recommendation for teachers' certificates.

First semester; M. W. F., 9:00; second semester; M. W. F., 8:00; Professors HILL, CAVINS, and HUDELSON, 17 W.

17. Principles of Study. (3 Hrs.) Open only to freshmen and sophomores. An examination of the principles of economic and effective studying. The processes of observation, reflection, and retention in studying are investigated from the biological and functional point of view. The factors of study are emphasized.

First semester; M. W. F., 10:00; Professor DEAHL, 17 W.

34. Introduction to Teaching. (3 Hrs.) For freshmen who have had neither normal training nor experience in teaching. A study of the advantages and disadvantages of the vocation of teaching. Observation and study of the various types of teaching, the opportunities for rendering service in the teaching profession, and individual fitness for the various types of service.

First semester; M. W. F., 11:00; Professor HILL, 17 W.

NOTE—Either 17 or 34 may be elected, but both courses will not be counted for teacher certification.

22. Directed Teaching. (2 Hrs.) Required for recommendation for teachers' certificates. This course consists in selecting and in organizing subject matter, lesson planning and conference teaching under the supervision of the instructor. The teaching is followed by a conference of the student with the supervising instructor. In this course each student will examine and interpret the nature and the

educative values of subject matter taught and the most economic and effective method of learning and of teaching the subject.

First semester; T. Th., 11:00; second semester; T. H., 11:00; Professors Hill, Cavins, and Hudelson, 16 W. Miss Breck, O. H.

Secondary Education.

14. High Schools and Secondary Education. (3 Hrs.) This course deals with the fundamental conceptions, historical and comparative, of the secondary school and its differentiation from other types of educational institutions. It aims to assist in adapting secondary education on the one hand to meet the needs of pupils, and on the other hand to meet the needs of society.

First semester; M. W. F., 10:00; Professor Hudelson, 16 W.

18. The Teaching of English in the Secondary School. (2 Hrs.) Primarily for juniors and seniors. A study of the history of the development of the English course in the American high school, the principles of the selection and organization of subject matter, of methods of teaching, and standards for measuring methods of teaching and subject matter.

Second semester; T. Th., 9:00; Miss Pollock, 30 W.

25. Normal School Problems. (2 Hrs.) The function of the normal school and other teacher-training agencies in the state; the relation of subject matter and its teachers to method and its teachers. A study of the appeal of the teaching profession, including the following topics: sources of recruits, reasonable certification requirements. compensation, tenure, pensions, social position, and growth in service.

Second semester; hours to be arranged; Professer Hill, 16 W.

28. Problems in Secondary Education. (2 Hrs.) This course aims, through a study of the means and materials of secondary education, to adopt the various high school subjects to the aims and functions arrived at in Education 14. Open to seniors and graduates.

Second semester; T. Th., 8:00; Professor Hudelson, 16 W.

32. Junior High School. (2 Hrs.) A study of the origin, development, and present organization and character of the junior high school. Opportunity will be afforded for observing and for doing constructive experimental work in junior high schools.

First semester; T. Th.; hours to be arranged; Professor Hudelson, 16 W.

Experimental Education, Tests, and Measurements.

26. **Statistical Methods Applied to Education.** (3 Hrs.) The purpose of this course is to acquaint the student with the most economical and scientific methods of handling educational materials. Practical problems are provided in order to give training in tabulating, graphing, and interpreting educational data. Open to seniors and graduates.

Second semester; M. W. F., 9:00; Professor CAVINS, 16 W.

27. **Experimental Education.** (3 Hrs.) The members of the class carry on a series of selected laboratory experiments to illustrate various types of learning. The laboratory work is accompanied by a critical study of the literature of experimental education. Open to juniors, seniors and graduates.

First semester; M. W. F., 9:00; Professor CAVINS, 16 W.

30. **Educational Tests and Measurements.** (3 Hrs.) This course provides for a study of the various standard scales, tests, and measurements that have been devised for measuring the results of teaching. It includes a study of the test movement, its possibilities and its limitations. Open to juniors, seniors and graduates.

First semester; M. W. F., 10:00; Professor CAVINS, 16 W.

20.† **Mental Tests and Measurements.** (The amount of credit will depend on the quality and quantity of work done, 2 to 6 hours.) Open to seniors and graduates. Mental traits and capacities of normal, retarded, and delinquent children; tests and measurements for learning and teaching; accurate standards for classifying and promoting pupils in school.

First or second semester; hours to be arranged; Professor DEAHL, 17 W.

Agricultural Education.

16. **Agricultural Education.** (3 Hrs.) Candidates for recommendation for a teacher's certificate who are registered in the College of Agriculture may take this course in place of Course 10 in their senior year. (See announcements of College of Agriculture.)

Second semester; T. Th., 11:00; Professor WINKLER, 27 M.

NOTE—for other courses in agricultural education, see announcements of the College of Agriculture.

ELECTRICAL ENGINEERING.

Credit will be given in the College of Arts and Sciences for courses 51 to 56 in electrical engineering offered in the College of Engineering. For details regarding these courses see the announcements of that college.

ENTOMOLOGY.

Professor Pearis.

1. General Entomology. (4 Hrs.) A study of the external structures, classification, habits, and local distribution of insects and their near relatives. Lectures and text-book. Laboratory and field work in the collecting and mounting of the more common local insects, the classification of the insects, and the study, aided by dissections and drawings, of the external anatomy of various types. Laboratory fee, $1.00.

Second semester; M. W. F., 11:00; Th., 2:00 A.

Credit will also be given in the College of Arts and Sciences for Courses 2, 3, 4, 5, 6 and 9 in entomology offered in the College of Agriculture. For detailed announcement of these courses see the announcements of that college.

FARM MANAGEMENT.

Associate Professor Dadisman.

2. Rural Economics. (3 Hrs.) The study of economics as related to all phases or rural life.

Second semester; M. W. F., 8:00.

Credit will also be given in the College of Arts and Sciences for Course 1 in farm management offered in the College of Agriculture. For detailed announcement of this course see the announcements of that college.

FRENCH.

For announcement of courses in French see Romance Languages, page 137.

ENGLISH.

Professors ARMSTRONG, COX, BARBE, and JOHNSON, Assistant Professors H. C. GRUMBINE, POLLOCK, and REED, Mr. WILLIAMS, Miss FROST, Miss LYTLE, Mrs. PETTIGREW, Mr. MODDER, Mr. WITHROW, and Miss SAYRE.

NOTE: All advanced courses in the English department must be preceded by freshman English, courses 1, 2, 26, and 27, unless specific exceptions are stated in the announcements. Students from colleges that do not require English 26 and 27 will be admitted to certain advanced courses in composition on the completion of English 1 and 2.

Composition and Rhetoric.

1. **Composition and Rhetoric.** (3 Hrs.) Primarily for freshmen. Required of all candidates for the bachelor's degree in all the colleges.

First semester; sections M. W. F. at 8:00, 9:00, 10:00, 11:00, 2:00 and 3:00; T. Th. S., at 9:00 and 10:00; Professor JOHNSON and staff.

Second semester; 8:00.

2. **Composition and Rhetoric.** (3 Hrs) Primarily for freshmen. Required of all candidates for the bachelor's degree in all the colleges. A continuation of Course 1. Presequisite: English 1.

Second semester; sections M. W. F. at 8:00, 9:00, 10:00, 11:00, 2:00 and 3:00; T. Th. S., at 9:00 and 10:00; Professor JOHNSON and staff.

NOTE: Students will not be continued in English 1 or 2 whose work during the first three weeks shows marked deficiency in spelling, punctuation, grammar, sentence structure, or paragraphing.

Engineering and agricultural students will be assigned as far as possible to special sections in freshman composition.

3. **Composition and Rhetoric.** (3 Hrs.) Primarily for sophomores. The course is designed for students who wish further training in writing than is afforded by the required freshman courses.

First semester; M. W. F., 8:00; Mr. WILLIAMS.

8. **Composition and Rhetoric.** (2 Hrs.) Primarily for sophomores. Specimens of various types of prose composition are studied in connection with the practice in composition.

Second semester; T. Th., 8:00; Miss LYTLE.

4. **Expository Writing.** (2 Hrs.) Primarily for sophomores. A study of general principles and analysis of typical specimens with special reference to practical forms of expository composition.

First semester; T. Th., 10:00; Professor Johnson.

6. **Description and Narration.** (3 Hrs.) Primarily for sophomores. A study of the general principles of description and narration with frequent themes and exercises.

First semester; M. W. F., 9:00; Miss Lytle.

12. **Short Story Writing.** (3 Hrs.) For sophomores or juniors. Prerequisite: two hours of advanced composition or consent of the instructor.

Second semester; M. W. F., 9:00; Miss Frost.

7. **Expository Writing.** (2 Hrs.) For sophomores and juniors. Special attention is given to the informal essay and other literary types of expository composition. Prerequisite: two hours of advanced composition or consent of the instructor.

Second semester; T. Th., 10:00; Professor Johnson. 24 W.

NOTE: Either Course 4 or Course 7 is required of students whose major is English.

13. **The Magazine Article.** (3 Hrs.) Fur juniors and seniors. Introductory to course 15. A general survey, followed by intensive study of one or two kinds. The course is especially designed for students who desire insight into technique, and practice in the essentials of present day magazine-writing. Assigned reading. Original articles of magazine length. Prerequisite: two hours of advanced composition or consent of the instructor.

First semester; M. W. F., 10:00; Professor H. C. Grumbine.

15. **Modern Prose.** (3 Hrs.) For juniors and seniors. A continuation of Course 13. A study of structure in the longer forms of periodical literature, with special reference to social and spiritual forces now prevalent, and to the historical evolution of style. Prerequisite: Two hours of advanced composition or consent of the instructor.

Second semester; M. W. F., 10:00; Professor Grumbine. 36 L.

14. **Technical English.** (1 Hr.) For seniors in the College of Engineering. Consideration of some special problems of technical composition; preparation, criticism, and revision of student exercises, reports, and theses; study of some good examples of technical literature.

Second semester; M. or F., 10:00; Professor Johnson, 24 W.

5.† **English Prose Style.** (2 Hrs.) For seniors and graduate students. Lectures, written exercises and study of prose masterpieces. The work will be varied to suit the needs of the students who desire the course.

First semester; T. Th., 11:00; Miss POLLOCK, 30 W.

9.† **Advanced Composition.** (2 Hrs.) For seniors and graduate students. The course is specially designed for students preparing to teach English composition in high schools. Practice in writing and correcting themes.

Second semester; T. Th., 11:00; Miss POLLOCK. 30 W.

16. **English Words.** (2 Hrs.) A study of English words and particularly of the student's individual vocabulary from the standpoint of correct usage and of propriety and effectiveness of diction. Prerequisite: Only English 1.

Second semester; T. Th., 10:00; Professor JOHNSON, 24 W. and Mr. WITHROW, 49 W.

17. **English Words.** (2 Hrs.) A study of the general vocabulary of modern English and of the origina, gradual differentiation in meaning, and present forms, uses, and grammatical functions of English words. The course is designed to afford the student greater facility in his own use of English. Prerequisite: Only English 1.

First semester; M. F., 10:00; Professor JOHNSON, 24 W.

Journalism.

The courses in journalism are planned to meet the needs of three classes of students: (1) Those who wish to make journalistic training and practice the nucleus of a general education that shall be strictly modern in content and that may in large measure be given direct, practical application; (2) those who believe that a mastery of effective newspaper English, a knowledge of how to attract the attention of both individuals and groups, and an understanding of the methods and devices underlying successful public-relations systems are indispensable in all modern business and industrial affairs; and (3) those who contemplate reportorial and literary work, class and industrial journalism or newspaper editing and management as a career.

Only courses 75 and 79 are to be regarded as English courses in counting up the maximum amount of credit in English (36 hours) allowed to any student. Other courses in journalism are free electives.

71. **News Gathering and Writing.** (3 Hrs.) News sources and methods of collection. News values as exemplified in representative newspapers. Typical newspaper narratives. Practice in gathering news and in writing the news story.

First semester; M. W. F., 11:00; Assistant Professor REED, 4 W.

72. **The Newspaper.** (3 Hrs.) Two lectures and three laboratory hours. A continuation of Course 71. Organization, style, methods and mechanical details of the newspaper. Analysis of representative publications. Functions of the weekly and the daily. Interviewing and newspaper correspondence. Syndicates and press associations. Consideration of and practice in the various phases of newspaper making. Prerequisite: Course 71.

Second semester; M. 11:00; W. 2:00-5:00; F. 11:00; Assistant Professor Reed, 4 W.

73. **Newspaper Editing I.** (2 Hrs.) One lecture and three laboratory hours. Editing reporter's copy, preparing headlines, rewriting, proof reading, making-up, type selection and printing processes. Additional prerequisites: Courses 71 and 72 or consent of the instructor.

First semester; M. 2:00-4:00; Th. 2:00-4:00; Assistant Professor Reed, 4 W.

74. **Newspaper Editing II.** (2 Hrs.) One lecture and three laboratory hours. Continuation of Course 73.

Second semester; M. 2:00-4:00; Th. 2:00-4:00; Assistant Professor Reed, 4 W.

75. **Feature Articles.** (2 Hrs.) Sources of materials for special articles; manner of treatment; types of feature stories; study and criticism of special articles in current magazines and newspapers, with special attention to agricultural and industrial journals. Practice in writing the feature story. Additional prerequisites: Courses 71 and 72 or consent of instructor; not open to sophomores.

First semester; T. Th., 9:00; Assistant Professor Reed, 4 W.

76. **Advertisement Writing.** (2 Hrs.) Principles and psychology of advertising. Problems of salesmanship through printed matter. Preparation of the important types of advertising copy and the planning of publicity campaigns. Additional prerequisites: Courses 71 and 72 or consent of instructor; not open to sophomores.

Second semester; T. Th., 9:00; Assistant Professor Reed, 4 W.

77. **Class, Trade and Industrial Journalism.** (2 Hrs.) Journalistic practice as adapted to the special needs of the professions, business, industry, technology and the like. Writing and research in special fields chosen by students. Primarily for seniors. Additional prerequisites: Courses 71, 72, 73 and 74 or consent of instructor.

First semester; T. Th., 8:00; Assistant Professor Reed, 4 W.

78. **History of Journalism.** (2 Hrs.) Lectures, readings and reports on the growth of American journalism and on the part of American journalists in the nation's progress. Additional prerequisites: Courses 71 and 72 or consent of instructor.

Second semester; T. Th., 8:00; Assistant Professor REED, 4. W

79. **The Editorial.** (2 Hrs.) Sources, themes and styles of editorials. News interpretation. Editorial study, analysis and classification. Writing of editorials and preparation of the editorial page. Primarily for seniors. Additional prerequisites: Courses 71 and 72 or consent of instructor.

Second semester; T. Th., 11:00; Assistant Professor REED, 4 W.

80. **The Country Newspaper.** (2 Hrs.) Conditions under which the village weekly and the small city daily are made. Editorial responsibility and opportunities for community service. Problems of rural news-gathering, country correspondence, advertising, business-office methods, and print-shop equipment. Special investigations. Auxiliary discussions by successful rural editors. Additional prerequisites: Courses 71, 72, 73 and 74 or consent of instructor.

First semester; T. Th., 11:00; Assistant Professor REED, 4. W.

English Language and Literature.

The aims of this division of English are: (a) a scientific knowledge of the origin and development of the English language; (b) a general acquaintance with English literature; (c) a specific knowledge of certain great authors, periods, and movements in English literature.

20. **Old English.** (3 Hrs.) For undergraduates and graduates. Required of all students who make English their major. The essentials of Anglo-Saxon grammar; translations.

First semester; M. W. F., 8:00; Professor COX, 32 W.

21. **Old English—Beowulf.** (3 Hrs.) For undergraduates and graduates. Translations with due attention to text, meter, and literary history. Prerequisite: English 20.

Second semester; M. W. F., 8:00; Professor COX, 32 W.

22. **Early Middle English.** (2 Hrs.) For juniors, seniors, and graduates. Reading of early middle English texts. Prerequisite: English 20.

First semester; T .Th., 8:00; Professor COX, 32 W.

24. **Chaucer.** (3 Hrs.) For juniors, seniors, and graduates. Required of all students who make English their major. The Canterbury Tales.

Second semester; M. W. F., 9:00; Professor Cox, 32 W.

25. **Shakespeare.** (3 Hrs.) For juniors, seniors, and graduates. Required of all students who make English their major. A critical reading of Hamlet, Henry IV, Part I, and Henry V.

First semester; M. W. F., 9:00; Professor Cox, 32 W.

26. **General Survey of English Literature.** (2 Hrs.) Primarily for freshmen. Required of candidates for degrees in the College of Arts and Sciences and in the College of Agriculture. Historical view of English literature from its beginnings to the eighteenth century, and a close critical study of a few classics from each of the great periods of literary development.

First semester; sections T. Th., 8:00, 9:00, 10:00, 11:00, 2:00, and 3:00; Professor Armstrong and staff.

27. **General Survey of English Literature.** (2 Hrs.) Primarily for freshmen. Required of candidates for degrees in the College of Arts and Sciences and the College of Agriculture. A continuation of English 26. A survey of English literature in the eighteenth and nineteenth centuries.

Second semester; sections T. Th., 8:00, 9:00, 10:00, 11:00, 2:00, and 3:00; Professor Armstrong and staff.

NOTE—Students are expected to take Courses 26 and 27 in connection with English 1 and 2, in order to make up five hours of freshman English required in each semester.

28.† **Shakespeare.** (3 Hrs.) For juniors, seniors, and graduates. Required of all students who make English their major. One play is studied closely and critically, and a number of others are read with attention to characters, plot development, and general literary interpretation.

Second semester; M. W. F., 8:00; Professor Armstrong, 31 W.

29.† **Milton.** (2 Hrs.) For juniors, seniors and graduates. A study of Milton's poems and the Areopagitica. (Omitted in 1922-23).

Second semester; T. Th., 11:00; Professor Cox, 32 W.

32. **English Literature.** (3 Hrs.) For sophomores, juniors, and seniors. From the death of Swift to the publication of the Lyrical Ballads (1745-1798). The authors studied are Gray, Collins, Johnson,

Goldsmith, Cowper, Sheridan, Burke, Burns, and Blake, with some attention to lesser authors.

First semester; M. W. F., 8:00; Professor BARBE, 33 W.

33.† **English Literature.** (3 Hrs.) For juniors, seniors and graduates. From the publication of the Lyrical Ballads to the death of Scott (1798-1832). The authors studied are Wordsworth, Byron, Shelley, Keats, and Scott. (Omitted in 1922-23).

Second semester; M. W. F., 9:00; Professor ARMSTRONG, 31 W.

35.† **English Literature.** (3 Hrs.) For juniors, seniors and graduates. A study of the chief prose writers of the nineteenth century exclusive of fiction.

Second semester; M. W. F., 9:00; Professor ARMSTRONG, 31 W.

44. **Mid-Victorian Poetry.** (2 Hrs.) For sophomores, juniors, and seniors. A study of the poetry of Matthew Arnold, Dante Gabriel Rosetti, and William Morris, and of the relation of these writers to the spirit of their time.

First semester; T. Th., 9:00; Professor BARBE, 33 W.

36. **The English Old Testament.** (3 Hrs.) For sophomores, juniors, and seniors. Required of all students who make English their major. A study of the Old Testament in English as literature; discussion of its literary forms and interpretation of some of its masterpieces.

First semester; M. W. F., 9:00; Professor ARMSTRONG, 31 W.

37. **The English New Testament.** (2 Hrs.) For undergraduates. A study of the New Testament in English as literature. All the books are read and a few studied with attention to literary form and interpretation.

First semester; M. W. F., 9:00; Professor ARMSTRONG, 31 W.

38. **The Short Story.** (2 Hrs.) For undergraduates. The short story as a form of literature. A study of its development and some of its types from Poe to the present time. (Omitted in 1922-23).

Second semester; T. Th., 10:00; Professor ARMSTRONG, 31 W.

39. **American Literature.** (3 Hrs.) For sophomores, juniors and seniors. A general survey of three centuries of prose and poetry in America as they express the life, spirit and ideals of the people.

First semester; M. W. F., 11:00; Professor ARMSTRONG, 31 W.

43.† **Types of American Fiction.** (3 Hrs.) For juniors, seniors, and graduates. A study of a few examples of the main types of

American fiiction with attention to their literary qualities and the pictures and problems of life presented. (Omitted in 1922-23).

First semester; M. W. F., 9:00; Professor Armstrong, 31 W.

41.† **American History in American Literature.** (2 Hrs.) For juniors, seniors, and graduates. A study, in chronological order, of the greater poems and stories that record the great events of American History and the achievements of the American spirit. (Omitted in 1922-23).

Second semester; T. Th., 9:00; Professor Armstrong, 31 W.

56. **Modern American Poetry.** (2 Hrs.) For sophomores, juniors and seniors. A study of current and recent poetry in America.

First semester; T. Th., 10:00; Professor Armstrong, 31 W.

57. **Modern British Poetry.** (2 Hrs.) For sophomores, juniors, and seniors. A study of representative current and recent poetry in Great Britain.

Second semester; T. Th., 9:00; Professor Barbe, 33 W.

23. **Pre-Shakespearean Drama.** (2 Hrs.) For seniors and graduates. From the beginnings of the English drama until the death of Spenser.

Second semester; T. Th., 8:00; Professor Cox, 32 W.

54.† **The Modern Drama.** (2 Hrs.) For juniors, seniors, and graduates. Readings, lcetures, and reports. A few foreign plays in translation will be considered.

Second semester; M. W. F., 11:00; Professor Cox, 32 W.

42.† **English Literature.** (2 Hrs.) For juniors, seniors, and graduates. Study of an author. The entire production or the most important work of some selected author is studied to gain a complete view. The author studied in 1923 is Browning.

Second semester; T. Th., 8:00; Professor Armstrong, 31 W.

47. **Wordsworth.** (3 Hrs.) For sophomores, juniors and seniors. A study of the poetry of Wordsworth. (Omitted 1922-23).

Second semester; M. W. F., 4:00; Professor Barbe, 33 W.

55. **Tennyson.** (2 Hrs.) Primarily for juniors and seniors. A study of Tennyson's Poetry.

First semester; T. Th., 11:00; Professor Cox, 32 W.

51. **Browning.** (3 Hrs.) For undergraduates. (Omitted 1922-23).

Second semester; M. W. F., 4:00; Professor Barbe, 33 W.

58.† **Rudyard Kipling.** (3 Hrs.) For juniors, seniors, and graduates. A study of the prose and poetry of Rudyard Kipling.

First semester; M. W. F., 11:00; Professor Cox, 32 W.

40.† **The Novel.** (3 Hrs.) For juniors, seniors, and graduates. Various types of the novel are studied in order to show its development and its relation to life.

Second semester; T. Th., 11:00; a third hour to be arranged. Professor Cox, 32 W.

46.† **A Study of Poetry.** (2 Hrs.) For juniors, seniors, and graduates. English poetry; types of poetry; the essential qualities of poetry; old and new forms; English metres. The course will include a study of a large number of illustrative examples.

Second semester; T. Th., 9:00; Professor BARBE, 33 W.

48.† **The Ballad.** (2 Hrs.) For seniors and graduates. A study of the traditional English and Scottish ballads with a special consideration of the types found in West Virginia. (Omitted in 1922-23).

Second semester; T. Th., 8:00; Professor Cox, 32 W.

52. **Nature Poetry.** (2 Hrs.) Primarily for juniors and seniors. Special attention is given to Wordsworth, Bryant, and Lowell. (Omitted in 1922-23).

First semester; T. Th., 11:00; Professor Cox, 32 W.

61.† **The Psychology of Composition and Literature.** (3 Hrs.) For seniors and graduates. An exposition of the theory of literary criticism based on a systematic consideration of the thought and feeling processes involved both in the creation of literature and in the appreciation of it. (Omitted in 1922-23).

First semester; T. Th., 10:00; third hour to be arranged; Assistant Professor GRUMBINE, 36 L.

62. **Comparative Literature.** (3 Hrs.) For sophomores, juniors and seniors. Reading from a few conspicuous novels from the seventeenth century to the present day. The novels chosen will include not only English and American authors but also standard English translations of a few French and German books.

Second semester; M. W. F., 9:00; Mr. WILLIAMS.

63.† **The Aesthetic of Composition and Literature.** (3 Hrs.) For seniors and graduate students. A continuation of Course 61. The

philosophy of beauty. The element of pleasure in literature as it appears in material, form, and expression. Individual investigation in the literature of criticism and in literature itself. Thesis Seminar. (Omitted in 1922-23).

Second semester; T. Th., 10:00; third hour to be arranged; Professor Grumbine, 36 L.

18. **The Teaching of English in the Secondary School.** (2 Hrs.) Primarily for juniors and seniors. A study of the history of the development of the English course in the American high school, the principles of the selection and organization of subject matter, of methods of teaching and standards for measuring methods of teaching and subject matter.

Second semester; T. Th., 9:00; Miss Pollock, 30 W.

GEOLOGY AND MINERALOGY.

Professor BROWN, Associate Professor TILTON and Assistant Professor SCHEFFEL.

NOTE—Excursions are taken by the classes over the outcrop of the Coal Measures and through the westernmost fold of the Appalachian Mountains, giving, within a radius of seven miles of the University, a complete geological section through the Mississippan and Pennsylvaniaian (Coal Measures) systems. Producing oil and gas wells are situated within ten miles of the University.

For a description of the geological meuseum and laboratory, see page 25 of the Catalogue.

1. **Physical Geography.** (3 Hrs.) This course treats of the surface of the earth, its form, and the forces in action, with their effect on the life upon it. Designed especially for those who wish to teach physical geography. Outdoor trips. Prerequisites: Some knowledge of physics or chemistry.

First semester; M. W. F., 8:00; Assistant Professor SCHEFFEL, 111 M. H.

2. **General Geology.** (3 Hrs.) Not open to freshmen. Surface features of the earth, stratigraphy, and structural geology. Numerous excursions will be taken. Text-book, Pirrson and Schuchert. Prerequisite: Some knowledge of chemistry.

First semester, section one; M. W. F., 11:00; Professor BROWN, 111 M. H.; engineers' section, M. W. F., 10:00, Assistant Professor SCHEFFEL, 111 M. H.; section three, M. W. F., 9:00; Associate Professor TILTON, 111 M. H.

Second semester; M. W. F., 11:00; Professor BROWN, 111 M. H.

21. **General Geology Laboratory.** (1 Hr.) Designed to accompany or follow Geology 2. A study of the commoner rocks and rock forming minerals; drawing of structural forms; interpretation of topographic maps; use of hand instruments.

Either semester; Th., 10:00-12:00; Assistant Professor SCHEFFEL, 111 M. H.

28. **Historical Geology.** (3 Hrs.) For juniors and seniors. A continuation of Geology 2. The history of the earth and its inhabitants as revealed in the rocks through the Paleozoic Era. Text-book, Pirrson and Schuchert. Prerequisite: Geology 2. Some knowledge of botany and zoology is desirable.

First semester; M. W. F., 11:00; Associate Professor TILTON, 111 M. H.

29. **Historical Geology.** (3 Hrs.) A continuation of course 28. The history of the earth and its inhabitants as revealed in the rocks

from the end of the Paleozoic Era to the present time. Text-book, Pirrsson and Schuchert, accompanied by collateral reading. Prerequisite: Same as for course 28.

Second semester; M. W. F., 11:00; Associate Professor Tilton, 112 M. H.

30. Historical Geology (Paleontology) Laboratory. (1 Hr.) A systematic study of invertebrate fossils designed to accompany Geology 28; following Shimer's "Introduction," Grabau and Shimer's "Index Fossils," and Zittel's "Paleontology."

First semester; T., 2:00-5:00; Associate Professor Tilton, 111 M. H.

32. Historical Geology (Paleontology) Laboratory. (1 Hr.) This course is a continuation of course 30, and is designed to accompany course 29. The first part of the semester is given to a further systematic study of Invertegrate fossils, the remainder to the study of the geologic history of Vertebrates. Text-book, Woodward's "Vertebrate Paleontology," supplemented by other texts and by the use of Ward's casts.

Second semester; T., 2:00-5:00; Associate Professor Tilton, 111 M. H.

33. Stratigraphic Paleontology. (1 Hr.) A study of the characteristic fossils used in the identification of strata. Prerequisite: Course 30.

Either semester; T., 2:00-5:00; Associate Professor Tilton, 111 M. H.

3. Historical Geology. (3 Hrs.) Not open to freshmen. A condensed course for those who cannot arrange to give both semesters to the subject. Text-book, Pirrsson and Schuchert. Prerequisite: Geology 2. Some knowledge of botany and zoology is desirable.

Second semester; M. W. F., 10:00; Associate Professor Tilton, 111 M. H.

31. Historical Geology (Areal and Structural) Laboratory. (1 Hr.) This course is guaranteed to accompany Geology 3, with special emphasis upon structural sections and areal geology, based upon reports and geologic folios, and upon field data obtained by the class.

Second semester; W., 2:00-5:00; Associate Professor Tilton, 111 M. H.

4. Economic Geology. (3 Hrs.) Designed for juniors and seniors. Treats of the occurrence and distribution of the non-metallic

minerals, with attention to the geology of coal, oil and gas. Text-book, Ries' Economic Geology. Prerequisite: Geology 2 or 6.

Second semester; M. W. F., 11:00; Assistant Professor SCHEFFEL, 111 M. H.

5. **Economic Geology.** (3 Hrs.) Designed for juniors and seniors. An account of the occurrence of ore deposits and the distribution of metallic minerals. Text-book, Ries. Prerequisites: Geology 2, or Geology 6.

Second semester; M. W. F., 10:00; Professor BROWN, 113 M. H.

6. **General Mineralogy.** (5 Hrs.) Designed for sophomores. The principles of crystallography, physical and chemical properties, formation, uses and determination of the more important minerals. Text-book, Moses and Parsons' Mineralogy. Prerequisites: trigonometry and some knowledge of chemistry and physics.

First semester; 8:00; Professor BROWN, 113 M. H.

7. **Determinative Mineralogy.** (5 Hrs.) A continuation of course 6. Work in determining minerals and making precise measurements with reflecting goniometer. Text-book, Moses and Parsons. Prerequisites: Geology 6, some knowledge of chemistry and physics.

Second semester; 8:00; Professor BROWN, 113 M. H.

8. **Geology of West Virginia.** (2 Hrs.) Designed for seniors and especially for teachers in high schools. This course is a physical history of the state and an account of its economic resources. Prerequisite: Geology 2.

First semester; T. Th., 11:00; Professor BROWN, 111 M. H.

10. **Building Stones.** (2 Hrs.) A study of rocks with about 400 specimens of the various types from many countries. Adapted to the needs of engineers and architects.

Second semester; T. Th., 11:00; Professor BROWN, 111 M. H.

11. **Petrography.** (2 Hrs.) Designed for juniors and seniors. General principles of the use of polarized light in the study of minerals, followed by the application of those principles in the study of rock-forming minerals and then of rocks. The lectures are accompanied by laboratory study of microscopical sections and of hand specimens. Prerequisite: Geology 2; preferably additional knowledge of mineralogy and of light.

First semester; T. Th., 9:00; laboratory hours to be arranged; Associate Professor TILTON, 112 M. H.

13. **Oil and Gas Geology.** (2 or 3 Hrs.) Designed for seniors. The origin, properties, distribution and mode of accumulation of oil and gas; solid and semi-solid bitumens; reservoirs of oil and gas;

location of wells; survey of scientific and technical literature bearing on the geology and production of oil and gas, including current journals, government and state publications. Text-book, Johnson and Huntley. Prerequisites: Geology 3, trigonometry, chemistry and physics.

First semester; T. Th., and a third hour to be arranged; 8:00; Assistant Professor Scheffel, 111 M. H.

17. Field Geology. (3 Hrs.) Designed for juniors and seniors. Each student will be assigned a near-by area and a complete study of its surface geology will be made in the field, with collection of specimens. From notes taken, the student will make a geological map with structure sections, and write a systematic description with interpretations. Text-book, Lahee. Prerequisites: Geology 3, surveying.

Second semester; Th., 11:00; S., 8:00-12:00; Assistant Professor Scheffel, 112 M. H.

Engineering Geology.

The following courses in geology designed particularly to meet the needs of students in mining engineering or in oil and gas engineering are offered in the College of Engineering.

89. Elementary Mineralogy. (2 Hrs.) Not counted for credit in the College of Arts and Sciences. Prerequisite: Chemistry 4 or equivalent.

First semester; T., 10:00; W., 2:00; Associate Professor Callen, 119 M. H.

92. Oil and Gas Production. (2 Hrs.) Leases and royalties; drilling and management of wells; valuation of oil and gas properties; reports on properties and prospects; size and scope of oil and gas companies; markets and supply; varieties and uses of refinery and other products of oil and gas. Addresses by oil and gas producers and other experts. Prerequisite: Geology 13.

Second semester; T. Th., 8:00; Assistant Professor Scheffel, 112 M. H.

97. Oil and Gas Laboratory. (2 Hrs.) Calorimeter tests on oil and natural gas; the testing of lubricating oils; determination of viscosity and flashing points; the analysis of gases; tests on the absorption and compression methods of deriving gasoline from natural gas, etc. Prerequisites: Chemistry 16, Geology 13.

Second semester; F., 8:00 and 2:00; Associate Professor Callen, 119 M. H.

NOTE—For further information regarding engineering geology see the announcements of the College of Engineering.

GERMANIC LANGUAGES AND LITERATURES.

Professor TRUSCOTT and Miss MARTIN.

1. **Elementary German.** (5 Hrs.) Pronunciation, grammar, reading of simple prose. Thomas's Grammar; Super's Reader; Grimm's Maerchen.

First semester; M. T. W. Th. F., 9:00 and 10:00; Miss MARTIN, 18 W.

2. **Elementary German.** (5 Hrs.) Continuation of course 1. Reading, diction, elementary composition. Immensee; Hoeher als die Kirche; Holzwarth's "Gruss aus Deutschland;" Truscott and Smith's "Elementary German Composition."

Second semester; M. T. W. Th. F., 9:00 and 10:00; Miss MARTIN, 18 W.

3. **German Prose and Composition.** (5 Hrs.) Reading of prose by modern authors; translation of English into German; grammar; diction. Truscott and Smith's "Elementary German Composition."

First semester; M. T. W. Th. F., 8:00; Miss MARTIN, 18 W.

4. **German Poetry and Composition.** (5 Hrs.) One long poem and one drama; well known short poems. The work in composition will be a continuation of that in Course 3. "Hermann und Dorothea;" "Wilhelm Tell;" Hatfield's "German Lyrics and Ballads."

Second semester; M. T. W. Th. F., 8:00; Miss MARTIN, 18 W.

5. **Germany and the Germans.** (3 Hrs.) A course of general information about the country and the people. Aus vergangener Zeit; Lodemann's Germany and the Germans; Tower's Germany of Today; Boles's Deutsche Wirtschaft.

First semester; M. W. F., 8:00; Professor TRUSCOTT, 18 W.

6. **Advanced Composition.** (2 Hrs.) Translation; diction, grammar. Bronson's Colloquial German; Osthaus's Prose Composition.

First semester; T. Th., 8:00; Professor TRUSCOTT, 18 W.

7. **Romantic Period.** (3 Hrs.) Reading selected from the prose and poetry of the first half of the nineteenth century. Prose by Arnim, Fouque, Chamisso, Eichendorff, and Immermann. Poetry by Heine, Platen, Schenkendorf, Rueckert and Uhland. This course is intended to follow Course 5.

Second semester; M. W. F., 8:00; Professor TRUSCOTT, 18 W.

8. **Advanced Composition.** (2 Hrs.) A continuation of Course 6. Jagemann's German Composition.

Second semester; T. Th., 8:00; Professor TRUSCOTT, 18 W.

9. **Schiller.** (5 Hrs.) Study of his life. Gedichte; selection from "Geschichte des dreissigjaehrigen Krieggs;" "Wallenstein."

First semester; M. T. W. Th. F., 9:00; Professor Truscott, 18 W.

10. **Goethe.** (5 Hrs.) Study of his life. Gedichte; Werther's Leiden; Torquato Tasso; Faust, Part I.

Semester, credit, and hour to be arranged; Professor Truscott, 18 W.

11.† **History of German Literature.** (3 Hrs.) Open to seniors and graduate students. The history of the literature to 1748; reading and discussion of works representative of the most important authors and periods. As a hand-book Klug's Geschichte der deustchen Nationalliteratur will be used.

First semester; M. W. F., 10:00; Professor Truscott, 18 W.

12.† **History of German Literature.** (3 Hrs.) Open to seniors and graduate students. A continuation of Course 11. The history of the literature from 1748 to 1900. The classical works of Lessing, Goethe and Schiller are not considered.

Second semester; M. W. F., 10:00; Professor Truscott, 18 W.

13. (G) **Lessing.** Open to graduate students. Study of his life. Minna von Barnhelm; Emilia Galotti; Nathan der Weise; Laocoon.

Semester, credits and hour to be arranged; Professor Truscott, 18 W.

14. (G) **Goethe's Faust.** Open to graduate students. The legend of Faust before the time of Goethe. Study of Goethe's Faust, Part I and Part II.

Semester, credit, and hour to be arranged; Professor Truscott, 18 W.

15. **Modern German Drama.** (2 Hrs.) A reading course. Prerequisites: Courses 1, 2, 3, 4 and 5.

First semester; T. Th., 11:00; Miss Martin, 18 W.

16. **Modern German Drama.** (2 Hrs.) A continuation of Course 15.

Second semester; T. Th., 11:00; Miss Martin, 18 W.

17. **German Novel and Short Story.** (2 Hrs.) A reading course in nineteenth century prose. Prerequisites: Courses 1, 2, 3, 4 and 5. (Omitted in 1922-23).

First semester; T. Th., 11:00; Miss Martin, 18 W.

18. **German Novel and Short Story.** (2 Hrs.) A continuation of Course 17. (Omitted in 1922-23).

Second semester; T. Th., 11:00; Miss Martin, 18 W.

19. **Scientific German.** (3 Hrs.) Intended for students in the scientific courses. Prerequisites: Courses 1, 2, 3 and 4.
First semester; M. W. F., 11:00; Professor TRUSCOTT, 18 W.

22. **Scientific German.** (3 Hrs.) Continuation of Course 19.
Second semester; M. W. F., 11:00; Professor TRUSCOTT, 18 W.

24. **Heine.** (3 Hrs.) Readings from his prose and poetry. For students who have had the first two years of German. The grade of work is the same as in German 5. (Omitted in 1922-23).
First semester; M. W. F., 8:00; Professor TRUSCOTT, 18 W.

25. **(G) German Themes.** Open to graduate students. A course in German themes. Translation of modern prose. Buchheim's German Composition.
Semester, credit and hour to be arranged; Professor TRUSCOTT, 18 W.

GREEK.

Professor BISHOP.

1. **Elementary Greek.** (5 Hrs.)
First semester; 11:00; 23 W.

2. **Elementary Greek.** (5 Hrs.) Continuation of Course 1.
Second semester; 11:00; 23 W.

3. **Xenophon's Anabasis.** (4 Hrs.)
First semester; M. T. Th. F., 10:00; 23 W.

4. **Selections from Lucian; Homer's Odyssey.** (4 Hrs.)
Second semester; M. T. Th. F., 10:00; 23 W.

7. **Plato's Apology, Krito, and Euthyphro.** (3 Hrs.)
First semester; M. W. F., 9:00; 23 W.

8. **Demosthenes On the Crown.** (3 Hrs.)
Second semester; M. W. F., 9:00; 23 W.

11. **Thucydides.** (3 Hrs.)
First semester; M. W. F., 9:00; 23 W.

14. **Euripides' Ion.** (3 Hrs.) Open to seniors and graduate students.
Second semester; M. W. F., 9:00; 23 W.

17. **The New Testament in Greek.** (3 Hrs.) Selected portions of the Gospels.
Second semester; M. W. F., 2:00; 23 W.

18. **The New Testament in Greek.** (3 Hrs.) Selected portions of the Acts and the Epistles.
First semester; M. W. F., 3:00; 23 W.

26. **Greek Archaeology.** (2 Hrs.)
First semester; T. Th., 3:00; 23 W.

20. **Mythology.** (2 Hrs.)
Second semester; T. Th., 3:00; 23 W.

15. **Greek Literature in Translation.** (2 Hrs.) Homer's Iliad or Odyssey. (Omitted 1922-23).
First semester; T. Th., 9:00; 23 W.

21. **Greek Literature in Translation.** (2 Hrs.) Tragedies of Euripides or of Sophocles. (Omitted, 1922-23).
Second semester; T. Th., 9:00; 23 W.

19. **Comparative Philology.** (2 Hrs.) A general introduction to the subject of comparative philology. Prerequisite: Credit for at least ten hours' college work in each of two foreign languages.
First semester; T. Th., 2:00; 23 W.

22. **Comparative Philology of the Aryan Family.** (2 Hrs.) A continuation of Course 19 which is prequisite.
Second semester; T. Th., 2:00; 23 W.

23. **Every Day Greek.** (1 Hr.) A study of the Greek origin of English words, especially of the technical vocabulary of chemistry, astronomy, physics, philosophy, and other sciences.
First semester; hour to be arranged; 23 W.

HISTORY AND POLITICAL SCIENCE.

Professor CALLAHAN, Professor CHITWOOD, Professor AMBLER, and Associate Professor HIGBY.

The work offered in this department includes: (1) Continental European History; (2) English History; (3) American History; and (4) Political Science.

Instruction is given by lectures, text-book work, assigned collateral readings; preparation of papers, syllabi, and maps; special reports, recitations, and informal conferences.

Students are encouraged to observe and to read contemporary history and politics.

An afternoon hour is designated for conference and for direction of library work.

History majors before their graduation are required to complete 25 hours in their major subject, including a seminar course, and to complete at least 6 hours in economics and sociology, at least 4 hours in a biological science (zoology or botany) and 3 hours in historical geology, and to meet all special requirements for the A. B. degree.

Continental European History.

Students who select continental European history as their principal study are advised to take French or German, in the early part of the University course.

Courses 10 and 11 are primarily for students who plan to choose a major in ancient languages. Most students (except pre-law students) should begin with Courses 12 and 14, which usually should be followed by Courses 17 and 18.

10. History of Ancient Civilization. (2 Hrs.) For freshmen. (Omitted 1922-23).

First semester; Associate Professor HIGBY.

11. History of Rome. (3 Hrs.) For freshmen. The aim of this course is to trace the development of Roman institutions, character, and civilization, and to call attention to the contributions of Rome to modern civilization. (Omitted 1922-23).

First semester; M. W. F., 8:00; Professor CHITWOOD, 41 W.

12. Medieval History. (3 Hrs.) Primarily for freshmen. A survey of the history and institutions of Europe during the Middle Ages.

First semester; M. W. F., 8:00 and 9:00; Associate Professor HIGBY, 43 W.

14. Modern European History. (3 Hrs.) Primarily for freshmen. A survey of the history and institutions of Europe during modern times. A continuation of History 12.

Second semester; M. W. F., 8:00 and 9:00; Associate Professor HIGBY, 43 W.

45. **Current European History.** (1 Hr.) For freshmen. A study of current history and politics in Europe and the East. (Omitted 1922-23).

Professor Chitwood, 41 W.

44. **The French Revolution and the Napoleonic Era.** (3 Hrs.) Primarily for juniors. Second semester. (Omitted 1922-23).

Associate Professor Higby.

47. **History of Spain.** (2 Hrs.) Primarily for juniors and seniors. A survey of Spanish history and civilization from earliest times to the death of Philip II.

First semester; T. Th., 10:00; Associate Professor Higby, 43 W.

48. **History of Spain.** (2 Hrs.) Primarily for juniors and seniors. A survey of Spanish history and civilization from the days of Philip II to the present day. A continuation of History 47.

Second semester; T. Th., 10:00; Associate Professor Higby, 43 W.

13.† **The Renaissance and the Reformation, 1300-1648.** (3 Hrs.) Open to seniors and graduate students. The development of the forces of modern civilization; survey of the economic, political, and intellectual conditions at the close of the middle ages; the Renaissance in Italy and Germany; the Protestant revolution in the principal European states; the counter-reformation; and the religious wars to the treaty of Westphalia. (Omitted 1922-23).

Second semester; T. Th. S., 8:00; Professor Chitwood, 41 W.

46.† **Expansion of Europe, 1500-1922.** For seniors and graduate students.

Associate Professor Higby, 43 W.

15.† **Continental Europe in the Nineteenth Century.** (3 Hrs.) For seniors and graduate students. An intensive study of political, economic and social conditions in the important states of Europe between 1815 and 1871. (Omitted 1922-23).

Associate Professor Higby, 43 W.

50.† **Contemporary Europe, 1870-1921.** (3 Hrs.) Open to seniors and graduate students. The political and social history of the leading European countries since 1870; events and conditions leading up to the Great War; events of the war; the peace negotiations. Prerequisite: A knowledge of the outline facts of European history from 1815 to 1870.

First semester; M. W. F., 11:00; Professor Chitwood, 41 W.

16. (G) **Seminar in European History.** (2 Hrs.) For graduates; open to seniors with the consent of the instructor.

First semester; T. Th., 11:00; Professor Chitwood, 41 W.

English History.

Courses 17 and 18 furnish a good foundation for the study of American history and law.

17. History of England to the Tudors. (3 Hrs.) Open to freshmen. A course in the general and institutional history of England. Special attention is given to political, economic and social life and development. The more important subjects in constitutional history or considered, showing how England learned to govern herself.

First semester; M. W. F., 10:00 and 11:00; Associate Professor HIGBY, 43 W.

18. History of England from the Tudors to the Present Time. (3 Hrs.) A continuation of Course 17. The upbuilding of the British Empire; constitutional and religious struggles of the sixteenth and seventeenth centuries; economic and social changes; international relations; struggle for colonial and commercial supremacy; and formation of modern conditions and institutions.

Second semester; M. W. F., 10:00 and 11:00; Associate Professor HIGBY, 43 W.

19. English Social and Industrial History. (3 Hrs.) Primarily for freshmen in home economics and agriculture..

First semester; M. W. F., 9:00; M. W. F., 11:00; Professor AMBLER, 49 W.

20. English Historical and Practical Politics: English Constitutional Law and History. (2 Hrs.) A seminar course arranged especially for advanced stpdents in history who desire a suitable preparation for courses in American government and law. Prerequisite: A general knowledge of English history and courses 17 (or 19) and 18. (Omitted 1922-23).

Associate Professor HIGBY, 43 W.

American History.

All students of American history should have Channing and Hart's Guide, and Shepherd's Historical Atlas.

7. History of The United States to 1840. (2 Hrs.) A general survey course offered only at extension centers.

First semester; Professor AMBLER.

8. History of The United States Since 1840. (2 Hrs.) A general survey course offered only at extension centers. Continuation of Course 7.

Second semester; Professor AMBLER.

29. American Social and Economic History. (3 Hrs.) Primarily for freshmen in agriculture and home economics. This course furnishes a proper basis for college courses in American history and economics. Not open to seniors or to students who have had History 22 or 23.

Second semester; M. W. F., 10:00, and M. W. F., 11:00; Professor CHITWOOD, 46 W.

32. History of West Virginia. (1 Hr.) For freshmen or sophomores. A general course in social, industrial, and political development. Considerable attention is paid to railroad development and the growth of towns.

First semester; Th., 10:00; Professor CALLAHAN, 20 L.

21. American Colonial History, 1492-1776. (2 Hrs.) Primarily for freshmen. European back-ground; discovery and settlement; the Anglo-French colonial conflict; adaptation of European civilization to American conditions and development of new institutions; relation of the colonies to England.

First semester; T. Th., 8:00; Professor CHITWOOD, 41. W.

22. The Formation of the Union: American Political History, 1776-1829. (3 Hrs.) Primarily for sophomores, but open to unconditioned "pre-law" freshmen who also have History 17. Special attention is given to political and constitutional development and to international relations, but economic and social conditions are also treated.

First semester; M. W. F., 9:00; T. Th., S., 9:00; Professor CHITWOOD, 41. W.

NOTE—Courses 22 and 23 should be taken in regular order. Students who can take only one course should register for Course 22.

23. Division and Reunion: American Political History Since 1829. (3 Hrs.) A continuation of Course 22. Primarily for sophomores but open to unconditioned, "pre-law" freshmen who also have History 17 or History 18.

Second semester; M. W. F., 9:00; T. Th. S., 9:00; Professor CHITWOOD, 41. W.

24. Reconstruction and Later American History. (3 Hrs.) Primarily for seniors but open to juniors who have had courses 22 and 23. A study of the period of American history, 1865 to the present time.

Second semester; M. W. F., 11:00; Professor AMBLER, 49 W.

51. **The Trans-Allegheny Frontier.** (2 Hrs.) For sophomores and juniors who have had one year in college history. A study in sectionalism and westward expansion.

First semester; T. Th., 9:00; Professor AMBLER, 49 W.

27. **Development of the West.** (2 Hrs.) For juniors, or other students who have had college courses in American history. The causes, problems and results of the westward advance. Early sectionalism, origin of new commonwealths, problems of transportation, geographic influences, evolution of frontier institutions and ideals, and relation to national politics. (Omitted 1922-23).

Second semester; T. Th., 9:00; Professor CALLAHAN, 20 L.

25. **(G) American Expansion Policy.** (2 Hrs.) For graduate students.

Hours to be arranged; Professor CALLAHAN.

26. **History of American Diplomacy and Foreign Policy, 1776-1920.** (2 Hrs.) Open to juniors and seniors who have credit for History 22 and 23.

Second semester; T. Th., 9:00; Professor CALLAHAN, 20 L.

31. **Latin-American History.** (2 Hrs.) Primarily for seniors, but open to graduates. The chief factors and phases of the development of the Latin-American countries from the era of settlement to the present time, with emphasis upon their recent diplomatic relations (especially inter-American), and present problems. (A knowledge of Spanish will be useful in this course). (Omitted 1922-23).

Second semester; T. Th., 9:00; Professor CALLAHAN, 20 L.

30.† **The American Revolution and the Making of the Constitution.** (2 Hrs.) For seniors and graduates.

First semester; T. Th., 10:00; Professor AMBLER, 49 W.

33. **(Education 33). The Teaching of History and Civics.** (2 Hrs.) For juniors and seniors preparing to teach in secondary schools.

Second semester; T. Th., 8:00; Professor AMBLER, 49 W.

52. **History of the South.** (2 Hrs.) For seniors and graduates. A study of the ante-bellum South with special reference to its dependence upon slave labor, staple crops, and free trade.

Second semester; M. F., 10:00; Professor AMBLER, 49 W.

53. **Problems of the Civil War Period (1850-72).** (3 Hrs.) For juniors and seniors.

Second semester; M. W. F., 9:00; Professor CALLAHAN, 20 L.

covered by Courses 22 and 23.

55. **Anglo-American Diplomatic Relations.** (2 Hrs.) For juniors and seniors who have had college courses in American political history. A study of Anglo- American contacts and conflicts in foreign policies, with special emphasis upon relations of United States with British America.

First semester; T. Th., 11:00; Professor Callahan, 20 L.

56. **American Relations With Latin America.** (2 Hrs.) For juniors and seniors who have had college courses in American political history. A survey of commercial and diplomatic relations, the Monroe Doctrine, Pan-Americanism and other problems of international policy. (Omitted 1922-23).

Second semester; T. Th., 11:00; Professor Callahan, 20 L.

64.† **Special American Diplomatic Problems.** (2 Hrs.) Primarily for history majors, seniors and gradates, whose previous credits include History 22, 23 and 26. A specialized study of selected topics, with practice in the use of available documentary materials.

Second semester; T. Th., 3:00; Professor Callahan, 20 L.

34. **(G) Seminar.** (2 Hrs.) Methods of historical research, construction, and interpretation. Theses in American history are prepared.

Semester and hours to be arranged; Professor Callahan, 22 L.

Historical Conference.

First and second semesters; 3:00; Professor Callahan, 22 L.

The attention of students taking American History is invited to the announcements of the Bryan prize and the Tax Commission prize on page 49 of the University Catalogue.

Political Science.

In all these courses, students should have a clear knowledge of the outlines of general history and especially of modern political history.

9. **American Political Parties.** (2 Hrs.) For sophomores. A study in the history of political parties and the use of party machinery.

Second semester; T. Th., 9:00; Professor Ambler, 49 W.

35. **American Practical Politics: Government at Work.** (2 Hrs.) A practical study of the actual workings of the government and politics of the United States, both state and national. Open to senior students who have familiar knowledge of American political history as

First semester; T. Th., 9:00; Professor Callahan, 20 L.

36.† **European Historical and Practical Politics.** (2 Hrs.) A study of the development and present day working of the political in-

stitutions and parties of the principal states of continental Europe. Open to advanced students who have had History 14 or its equivalent. (Omitted 1922-23).

Second semester; T. Th., 11:00; Associate Professor HIGBY, 43 W.

37. **State and Local Government.** (2 Hrs.) For freshmen and sophomores. An introductory study in government offered with a view to training for citizenship.

First semester; T. Th., 11:00; Professor AMBLER, 49 W.

38. **State and Local Administration.** (2 Hrs.) For freshmen and sophomores. A continuation of course 37 with emphasis upon administration.

Second semester; T. Th., 11:00; Professor AMBLER, 49 W.

68. **Current Problems in Politics.** (1 Hr.)

Second semester; T., 9:00.

39.† **Political Theories.** (2 Hrs.) For seniors and graduates. A brief survey of the nature, origin, and function of the modern state. (Omitted 1922-23).

Professor AMBLER.

40. **Municipal Government.** (3 Hrs.) For sophomores and juniors. A study in the history and administration of American municipalities with special reference to present forms of government.

Second semester; M. W. F., 8:00; Professor AMBLER, 49 W.

43.† **International Law and Practice of Diplomacy.** (2 Hrs.) Open to seniors and graduate students with a knowledge of modern history, especially courses 22 and 23.

Second semester; T. Th., 11:00; Professor CALLAHAN, 20 L.

HOME ECONOMICS.

Courses in this subject are offered in the College of Arts and Sciences and in the College of Agriculture. For a detailed description of these courses see the announcements of the College of Agriculture.

ITALIAN.

For courses in this subject see Romance Languages, page 140.

HORTICULTURE.

Credit will be given in the College of Arts and Sciences for Courses 2 and 3 in horticulture offered in the College of Agriculture. For detailed announcements of these courses see the announcements of the College of Agriculture.

LATIN.

Professor Cannaday and Professor Hare.

Courses 1, 2, 3 and 4 may be offered for entrance or taken as college work. Students offering two units for entrance will begin with 1, those offering three units will begin with 3, and those offering four units with 5. Additional courses are required of those making Latin their major, depending on the amount offered for entrance. Students making Latin their major will also take History 10 and 11. See page 112.

21. Elementary Latin. (5 Hrs.) Only for students who are preparing for law or medicine. Not counted for credit toward the A. B. degree. An intensive course covering in one semester what is usually called First Year Latin. Much written work is required in addition to class-room instruction.

First semester; M. T. W. Th. F., 8:00 and M. T. W. Th. F., 10:00; Professor Cannaday, 29 W.

22. Elementary Latin. (5 Hrs.) Continuation of 21 and subject to same restriction as to credit. Text read will be Caesar or an equivalent. The course also calls for written work based upon the text read.

Second semester; M. T. W. Th. F., 8:00 and M. T. W. Th. F., 10:00; Professor Cannaday, 29. W.

1. Cicero. (4 Hrs. or if offered to remove entrance conditions, one-half unit.) Primarily for freshmen offering two units for entrance. The first three orations against Catiline are read. Prerequisite: Two units of high school Latin.

First semester; 8:00; Professor Hare, 12 W.

2. Cicero. (Credit same as in Course 1.) Continuation of Course 1. The orations read are the fourth oration against Catiline, the oration of Archias and the Manilian law. Prerequisite: Latin 1.

Second semester; 8:00; Professor Hare, 12 W.

3. Virgil. (Credit same as in Course 1.) Primarily for freshmen offering three units for entrance. The first three books of the Aeneid are read. Composition once a week. Prerequisite: Latin 2.

First semester; M. T. Th. F., 9:00; Professor Hare, 12 W.

4. Virgil. (Credit same as in Course 1.) Continuation of Course 3. Books four, five, and six are read. Prerequisite: Latin 3.

Second semester; M. T. Th. F., 9:00; Professor Hare, 12 W.

5. Cicero—De Senectute and De Amicitia; Livy XXI. (5 Hrs.) Open to students who have had the preceding or four units of high school Latin.

First semester; 9:00; Professor Cannaday, 29 W.

6. **Livy XXII and Horace—Odes and Epodes.** (5 Hrs.) Continuation of Course 5. Particular attention to the meters of Horace, his style and his philosophy of life.

Second seemster; 9:00; Professor CANNADAY, 29 W.

12. **Ovid—Metamorphoses.** (3 Hrs.) A course in rapid reading, with a discussion of the meaning and sources of the myths read. Primarily for sophomores.

First semester; M. W. F., 11:00; Professor CANNADAY, 29 W.

8. **Comedy.** (3 Hrs.) Five or six plays of Plautus and Terence Study of characters, development of plot ,etc. Primarily for sophomores.

Second semester; M. W. F., 11:00; Professor CANNADAY, 18 W.

9. **Teachers' Course in Latin.** (2 Hrs) A discussion of Latin in its relation to modern languages, questions of style, methods of translation and other matters that concern the prospective teacher of Latin.

First semester; T. Th., 11:00; Professor CANNADAY, 29 W.

10. **Teachers' Course in Latin.** (2 Hrs.) Continuation of 9.

Second semester; hours to be arranged; Professor CANNADAY, 29 W.

11. **Horace—Satires and Epistles.** (4 Hrs.) For juniors and seniors. Selected satires and epistles are read, with attention to Horace's personal life.

First semester; hours to be arranged; Professor CANNADAY, 29 W.

17. **Roman Life and Customs.** (4 Hrs.) The basis for this study will be selections from the letters of Cicero and Pliny and the satires of Juvenal. For juniors and seniors. A study of the Romans in their homes, their intercourse in business and professional life.

Second semester; hours to be arranged; Professor CANNADAY, 29 W.

18.† **Outlines of Latin Literature.** (3 Hrs.) Open to seniors and graduate students. The representative writers of the different periods will be discussed in some detail and a considerable amount of parallel reading will be required.

First semester; hours to be arranged; Professor CANNADAY, 29 W.

LAW.

Candidates for the regular A.B. degree may elect not more than fifteen hours of law. Candidates in the combined A.B and LL.B. course may count the entire first-year work in law for credit toward the A.B. degree.

LIBRARY METHODS.

Dr. Arnett.

1. **Library Methods.** (2 Hrs.) An introductory course for the purpose of acquainting students with the University Library and the practice of library methods; instruction in the use of catalogues, indexes, and general reference books, and in the selection and purchase of books.

First semester; T. Th., 8:00; L.

2. **Library Methods.** (2 Hrs.) Theory and practice of library methods, including elementary cataloguing, classification, binding and repair of books, loan desk, etc.

Second semester; T. Th., 8:00; L.

3. **Advanced Study and Practice in Library Methods.** (2 Hrs.) Intended for those specializing for library work. Hours to be arranged.

MACHINE DESIGN AND CONSTRUCTION.

Credit not to exceed fifteen hours in all will be given in the College of Arts and Sciences for Courses 20, 21, 22, 23, 24, 25, 28 and 30 in mechanical drawing, Course 26 in descriptive geometry, Courses 27 and 9 in mechanism and machinery and Courses 46 and 47 in industrial management offered in the College of Engineering. For detailed announcements of these courses see the announcements of that college.

MATHEMATICS.

Professors EIESLAND and HODGSON, Assistant Professor REYNOLDS, Miss TORREY, Miss FISHER, Mr. MONTGOMERY.

Courses 9, 10, 11 and 12 are required of those who choose mathematics as a major subject. Courses 9, 10, and 11 are recommended for those whose major is physics.

2. **Solid Geometry.** (3 Hrs.) (If offered to remove entrance condition one-half unit).

First semester; 10:00; Mr. MONTGOMERY, 219 M. H.

Second semester; 10:00; Miss FISHER, 225 M. H.

3. **Advanced Algebra.** (3 Hrs.)

First and second semester; for students in the College of Arts and Sciences; M. W. F., 8:00 and 11:00; Assistant Professor REYNOLDS and Miss TORREY, 219 and 205 M. H.; for students in the College of Engineering, (in combination with Course 4); daily, 8:00, 9:00, 10:00 and 11:00; Professor EIESLAND and staff; (in combination with Course 6); daily, 9:00, 10:00, 11:00; Miss TORREY, Miss FISHER, and Mr. MONTGOMERY.

4. **Plane Trigonometry.** (2 Hrs.)

First and second semesters; for students in the College of Arts and Sciences; T. Th., 8:00 and 11:00; Assistant Professor REYNOLDS and Miss FISHER; 219 and 225 M. H.; for students in the College of Engineering (in connection with Course 3); daily, 8:00, 9:00, 10:00, and 11:00; Professor EIESLAND and staff.

5. **Analytic Geometry.** (3 Hrs.) Prerequisite: Courses 3 and 4.

Second semester; for students in the College of Arts and Sciences; T. Th., 9:00 and 11:00; Assistant Professor REYNOLDS and Miss TORREY; 229 and 225 M. M.; for students in the College of Engineering (in connection with Course 6); daily, 8:00, 9:00, 10:00, and 11:00; Professor EIESLAND and staff.

6. **Trigonometry and Topics in Advanced Algebra.** (2 Hrs.) A continuation of courses 3 and 4, including topics in plane trigonometry and advanced algebra, and also applications of spherical trigonometry to elementary problems in astronomy.

Second semester; for students in the College of Arts and Sciences; T. Th., 10:00; Assistant Professor REYNOLDS; 225 M. H.; for students in the College of Engineering (in combination with Course 5); daily, 8:00, 9:00, 10:00, and 11:00; Professor EIESLAND and staff; (in combination with Course 3); daily, 9:00, 10:00, and 11:00; Miss TORREY, Miss FISHER and Mr. MONTGOMERY.

7. Differential and Integral Calculus. (3 Hrs.) Prerequisites: Courses 3, 4, 5 and 6.

First semester; M. W. F., Conference hours, T. Th., 8:00 and 11:00; Professors EIESLAND and HODGSON, Assistont Professor REYNOLDS; 225 and 219, 225 and 205 M. H.

8. Differential and Integral Calculus. (3 Hrs.) A continuation of Course 7.

Second semester; M. W. F., Conference hours, T. Th., 8:00 and 11:00; Professors EIESLAND and HODGSON, and Assistant Professor REYNOLDS; 225 and 219 M. H.

NOTE—In courses 7 and 8, the part of each denoted as "conference," two hours weekly, is not intended to increase the amount of prepared work. It really amounts to two hours weekly of study in preparation for the regular class recitation with the help and guidance of the teacher. Attendance at these conferences is required.

9.† Differential Equations. (3 Hrs.) This course is especially recommended for those who expect to take up advanced work such as physical chemistry, mathematical physics and theory of electricity. Prerequisites. Courses 7 and 8 or 13 and 14.

First and second semesters; M. W. F., 5:00; Professor EIESLAND, M. H.

10.† Theory of Determinants and Analytic Geometry of Space. (2 Hrs.) Open to seniors and graduate students. Prerequisites: Courses 7 and 8 or 13 and 14.

First semester; M. W., 4:00; Professor HODGSON; 225 M. H.

11.† Advanced Topics in Calculus. (2 Hrs.)

Second semester; T. Th., 3:00; Assistant Professor REYNOLDS, 205 M. H.

12.† Projective Geometry. (3 Hrs.) Open to seniors and graduate students.

Second semester; M. W. F., 4:00; Professor HODGSON, 225 M. H.

13. Analytic Geometry and Calculus. (5 Hrs.) Prerequisites: Courses 2, 3 and 4.

First semester; 8:00, 10:00 and 11:00; Miss FISHER, Mr. MONTGOMERY, Miss TORREY, 225, 114, 219 M. H.

14. Differential and Intregral Calculus. (5 Hrs.) Continuation of Course 13.

Second semester; 8:00, 10:00 and 11:00; Miss FISHER, Mr. MONTGOMERY, Miss TORREY; 225, 219, 114 M. H.

NOTE—Courses 13 and 14, which are intended for science as well as engineering students are equivalent to Courses 5, 7, and 8.

Undergraduate Courses in Applied Mathematics.

22. **Mathematics for Agriculture and General Science.** (3 Hrs.) Primarily for students of agriculture and biological science. The course includes such topics as the following: review of elementary algebra, graphic methods, logarithms, trigonometry and land surveynig, calculation of errors, annuities, laws of heredity, probability. Prerequisite: One year's work in elementary algebra.

First semester; M. W. F., 4:00; Mr. MONTGOMERY, 114 M. H.

23. **The Mathematical Theory of Investment.** (3 Hrs.) Primarily for students of economics and sociology. The following are among the topics treated: theory of series and logarithms, interest and annuities, amortization, valuation of bonds, sinking funds and depreciation, theory of probability, annuities, life insurance. Prerequisites: a fair knowledge of algebra through quadratics.

First and second semesters; hours to be arranged; Assistant Professor REYNOLDS, 8 W.

24. **Mathematics for Agriculture and General Science.** (2 Hrs.) Continuation of Course 22.

Second semester; 4:00; Mr. MONTGOMERY, 114 M. H.

25. **Elementary Mathematical Analysis.** (3 Hrs.) Prerequisites: Course 22 or Courses 3 and 4.

First and second semesters; 10:00 and 4:00; Mr. MONTGOMERY, 114 M. H.

NOTE—Courses 22, 23 and 24 may be chosen by students who wish to take 8 hours of mathematics for the requirement of group 4 (physics, chemistry, mathematics). They are also recommended to students of chemistry.

Astronomy.

1. **Descriptive Astronomy.** (3 Hrs.) Opportunity is given to those who wish to do sextant work or work with a portable transit.

Second semester; hours to be arranged; Professor EIESLAND, 11 M. 205 M. H.

Courses for Graduate Students.

16. (G) **Higher Plane Curves with Special Reference to Curves of the Third and the Fourth Order.** (2 Hrs.) Open only to graduate students.

First semester; hours to be arranged; Professor HODGSON.

56. (G) Higher Plane Curves with Special Reference to Curves of the Third and Fourth Order. (2 Hrs.) Continuation of Course 16.

Second semester; hours to be arranged; Professor HODGSON.

17. (G) Introduction to the Theory of Functions of a Complex Variable. (Hrs.) Open only to graduate students.

First semester; hours to be arranged; Professor EIESLAND.

18. (G) Higher Algebra and Introduction to the Theory of Invariants. (Hrs.) Open only to graduate students.

First semester; hours to be arranged; Professor HODGSON.

19. (G) Differential Geometry and Theory of Surfaces. (3 Hrs.)

First semester; hours to be arranged; Professor EIESLAND.

59. (G) Differential Geometry and Theory of Surfaces. (3 Hrs.) Continuation of Course 19.

Second semester; hours to be arranged; Professor EIESLAND.

20. (G) Theory of Numbers. (2 Hrs.) Open only to graduate students. An elementary course.

First semester; hours to be arranged; Professor HODGSON.

26. (G) Introduction to the Theory of Integral Equations. (3 Hrs.) Open only to graduate students.

Second semester; hours to be arranged; Assistant Professor REYNOLDS.

21. (G) Vector Analysis. (3 Hrs.)

Second semester; hours to be arranged; Professor EIESLAND.

27. (G) Differential Geometry of Hyper-Space with Introduction to the Algebra of Tensors and the Theory of Relativity. (3 Hrs.)

Any semester; hours to be arranged; Professor EIESLAND.

MINING ENGINEERING.

Credit will be given in the College of Arts and Sciences for Courses 85 and 96 in metallurgy offered in the College of Engineering. For detailed announcements of these courses see the announcements of that college.

MUSIC.

Credit not to exceed fifteen hours in all will be given in the College of Arts and Sciences for Courses 1, 2, 3 and 4 in the theory of music and Courses 5 and 6 in the history of music offered in the School of Music. For detailed announcements of these courses see the announcements of the School of Music.

PHILOSOPHY.

Professor CANTRALL and Assistant Professor WINTER.

The work of the department of philosophy is intended to afford a means of culture and to serve as an organizing factor in general education.

The courses in psychology are planned (1) to meet the needs of students who desire an acquaintance with the elementary principles of psychology and their relation to the larger social and scientific interests of modern life; and (2) to prepare students for the application of these principles to philosophy, education and the sciences.

Students electing philosophy as a major subject must take at least 25 hours of work in the department. No course in the department is open to freshmen. Course 6 is the only course in the department without a prerequisite.

6. **Human Nature.** (3 Hrs.) A non-technical, extensive, general course given wholly for the purpose of background for further courses.

First semester; M. W. F., 10:00; Professor CANTRALL, 33 L.

1. **Introduction to Psychology.** (4 Hrs.) This course is prerequisite to all other courses in the department except Course 6. It includes a study of the elementary principles of psychology, and will be accompanied by demonstrations and class experiments. Prerequisite: One year of science. If the year of science has not been zoology it is recommended that a course in zoology accompany the course in psychology.

First and second semesters; M. T. Th. F., 9:00; Assistant Professor WINTER, 33 L.

12. **Experimental Psychology.** (2 Hrs.) This course is intended to give the student a general acquaintance with experimental psychology. It will consist of two two-hour periods, and will include lectures, readings, and individual laboratory work. Prerequisite: Course 1.

First and second semesters; T. Th., 2:00-4:00; Assistant Professor WINTER, 33 L.

27. **Comparative Psychology.** (2 Hrs.) A study of the intelligence of animals in its relation to human intelligence. Prerequisite: Course 1.

First semester; T. Th., 11:00; Assistant Professor WINTER, 33 L.

16. **Social Psychology.** (3 Hrs.) A study of the dispositions, prejudices and attitudes acquired from the social environment, to-

gether with an explanation of the divergent types of thinking in the conflicting groups in modern society. Prerequisite: Course 1.

First semester; M. W. F., 11:00; Assistant Professor Winter, 33 L.

18. **Advanced Psychology.** (3 Hrs.) This course will consist of a critical and constructive study of systematic psychology. Prerequisites: Courses 1 and either 15 or 23.

Second semester; M. W. F., 11:00; Assistant Professor Winter or Professor Cantrall, 33 L.

29. **Abnormal Psychology.** (2 Hrs.) A study of the variants of normal consciousness as found in dreams, multiple personality, hysteria, hypnotism, etc., in their relation to normal mental life. Prerequisite: Course 1.

Second semester; T. Th., 11:00; Assistant Professor Winter, 33 L.

20. **Applied Psychology.** (2 Hrs.) A study of the application of psychology to advertising, salesmanship, law, and medicine. Prerequisite: Course 1. (Omitted 1922-23).

Second semester; T. Th., 10:00; Assistant Professor Winter, 33 L.

24. **Genetic Psychology.** (2 Hrs.) A study of the development of human intelligence from infancy to maturity. Prerequisite: Course 1. (Omitted 1922-23).

First semester; T. Th., 11:00; Assistant Professor Winter, 33 L.

21. **Psychology of Religion.** (3 Hrs.) A study of the habits, impulses and beliefs in religious experience, such as sacrifice, ceremonial, prayer and conversion. Prerequisites: Courses 1 and 10. (Omitted 1922-23).

First semester; M. W. F., 11:00; Assistant Professor Winter or Professor Cantrall, 33 L.

15. **Philosophical Introduction.** (3 Hrs.) An introduction to the point of view, the scope, and the significance of philosophy. Prerequisite: Course 1.

Second semester; M. W. F., 10:00; Professor Cantrall, 33 L.

5. **Elementary Course in Ethics.** (3 Hrs.) A study of the principles and problems of morality. Prerequisite: Course 1.

First semester; M. W. F., 9:00; Professor Cantrall, 33 L.

10. Elementary Course in Religion. (3 Hrs.) A study of the significance of religious teaching and of the nature and grounds of belief. Prerequisites: Course 1 and one other course.

Second semester; M. W. F., 9:00; Professor CANTRALL, 33 L.

19. Logic. (3 Hrs.) A study of logical analysis, the use of the syllogism, and the detection of fallacies. A study also of the principles and methods of science. Prerequisite: Course 1.

First semester; M. W. F., 8:00; Professor CANTRALL, 33 L.

23. Introduction to Philosophy. (3 Hrs.) This course is an approach from the standpoint of logic and science and examines the logical structure of philosophical systems. Prerequisites: Courses 1 and 2.

Second semester; M. W. F., 8:00; Professor CANTRALL, 33 L.

7. History of Philosophy. (3 Hrs.) A survey of the principal philosophical systems in their historical setting together with their implications. Prerequisites: Courses 1 and either 15 or 23. (Omitted 1922-23).

First semester; Professor CANTRALL or Assistant Professor WINTER, 33 L.

8. History of Philosophy. (3 Hrs.) Special attention to some period or subject. Prerequisites: The same as for Course 7. (Omitted 1922-23).

Second semester; Professor CANTRALL or Assistant Professor WINTER, 33 L.

31. Ethics. (3 Hrs.) This is an advanced course in ethical theory. Prerequisites: Courses 1 and 5 and one of the following: 15, 23, 7, 8.

First semester; M. W. F., 11:00; Professor CANTRALL, 33 L.

32. Ethics. (3 Hrs.) The nature and plan of this course will be adapted to the needs of the class. Prerequisites: The same as for Course 31.

Second semester; M. W. F., 11:00 Professor CANTRALL, 33 L.

83. Problems of Philosophy. (3 Hrs.) A study of one or more problems of philosophy. Prerequisites: Courses 1 and either 15 or 23 and either 7 or 8 or equivalents. (Omitted 1922-23).

First semester; M. W. F., 11:00; Professor CANTRALL, 33 L.

84. Problems of Philosophy. (3 Hrs.) This course is of the same nature and the prerequisites are the same as for Course 83. (Omitted 1922-23).

Second semester; M. W. F., 11:00; Professor CANTRALL, 33 L.

PHYSICAL EDUCATION.

Courses for Women.

Miss BRUNHOFF.

1. **Physical Training and Hygiene.** (1 Hr.) Primarily for students who have had no previous college work in physical training. Lectures, formal drills, natural gymnastics, games, rhythm drills, and group and folk dancing.

First semester; M. W. F., 4:00.

2. **Physical Training and Hygiene.** (1 Hr.) A continuation of Course 1.

Second semester; M. W. F., 4:00.

3. **Corrective Gymnastics and Hygiene.** (1 Hr.) This course may be taken in place of Course 1 by students who desire special gymnastics for the correction of some physical defect or weakness.

First semester, hours to be arranged.

4. **Corrective Gymnastics and Hygiene.** (1 Hr.) A continuation of Course 3.

Second semester; hours to be arranged.

5. **Physical Training and Hygiene.** (1 Hr.) Prerequisite: Courses 1 and 2 or 3 and 4.

First semester; T. Th., 4:00; S. 9.00.

6. **Physical Training and Hygiene.** (1 Hr.) A continuation of Course 5.

Second semester; T. Th., 4:00; S. 9:00.

PHYSICS.

Professor WAGGONER, Professor MOLBY, Assistant Professor GEORGE, Mr. FORD and Mr. HILL.

NOTE.—For description of the physical laboratories see page 24 of the University Catalogue.

The various courses offered in physics are designed to meet the needs of the students in the Colleges of Arts and Sciences, Agriculture, and Engineering, and in the School of Medicine. For students who expect to teach physics the laboratory offers facilities for individual laboratory work and the construction of apparatus.

1. **Introductory Physics.** (3 Hrs.) Primarily for freshmen. Required for students in the Colleges of Agriculture, and the School of Medicine. The course is based on Kimball's College Physics and presents the fundamental principles of physics and their application

to every day life. See Course 2 below. Prerequisite: plane geometry.

First semester; lectures; M. W., 8:00; Professor WAGGONER, 20 M.; Quiz; various sections as announced in the semester schedule.

2. **Introductory Physical Laboratory.** (1 Hr.) This course accompanies, and is required of all students who take Courses 1 and 6. The course consists of individual, quantitative determination of the various physical constants, and occupies one laboratory period per week.

First semester; various sections as announced in the semester schedule; Professor MOLBY and staff.

3. **Introductory Physics.** (3 Hrs.) A continuation of Course 1 which is a prerequisite. See Course 4 below.

Second semester; lectures; M. W., 8:00; Professor WAGGONER, 20 M.; Quiz; various sections as announced in the semester schedule.

4. **Introductory Physical Laboratory.** (1 Hr.) A continuation of Course 2, which is prerequisite.

Second semester; various sections as announced in semester schedule; Professor MOLBY and staff.

6. **General Physics.** (4 Hrs.) Required of all candidates for engineering degrees, and recommended for all students in Arts and Sciences who elect physics from the science group. Not open to students who have credit for Course 1. The derivation of the mathematical statements of the laws of physics and their application to the solution of engineering problems. Prerequisites: trigonometry and analytic geometry. No student is permitted to take this course without its accompanying laboratory exercise, which is Course 2.

First semester; T. W. Th. F., 9:00; Professor WAGGONER and staff, 20 M.

8. **General Physics.** (4 Hrs.) A continuation of Course 6 which is prerequisite. Not open to students who have credit for Courses 1 and 3. No student is permitted to take this course without its accompanying laboratory exercise which is Course 4.

Second semester; T. W. Th. F., 9:00; Professor WAGGONER and staff, 20 M.

9.† **Light.** (3 Hrs.) Lectures and laboratory work. Open to seniors and graduate students. This course is designed to meet the needs of students in general biology, chemistry and medicine. Prerequisites: Physics 1, 2, 3, 4 or 6, 2, 8, 4, and trigonometry.

First semester; hours to be arranged; Professor MOLBY, 16 M.

10. **Electrical Measurements.** (3 Hrs.) This course is designed for, and required of the candidates for the degree of B.S.M.E., and B.S.Chem.E. It consists of the study of photometry, magnetic properties of materials, the theory, calibration, and use of various electrical instruments. Prerequisites: Physics 1, 2, 3, 4 or 6, 2, 8, and integral calculus.

First semester; T. Th., 11:00; laboratory, W., 2:00-4:00; Professor Waggoner, 16 M.

11.† **Radio-Telegraphy and Radio-Telephony.** (4 Hrs.) Open to seniors and graduate students. Elective for seniors in electrical engineering. A study of modern methods used in radio-transmission of intelligence. The department has a small installation for radio-telegraphy which is used as a basis for the laboratory study of various systems of transmission. Students are expected to spend one evening (8:00-11:00 p. m.) each week in the laboratory in addition to the regular required laboratory work. Prerequisites: Physics 10, or its equivalent.

Second semester; T. Th., 11:00; laboratory, W. 3:00-5:00; Professor Waggoner, 16 M.

12. **Photography.** (2 Hrs.) Open to all students of the University. One lecture and one laboratory exercise per week. The simple theory of photography; making lantern slides, micro-photographs and portraits. Students will be expected to purchase the necessary supplies.

Second semester; lectures, Th., 4:00; laboratory, hours to be arranged; Professor Molby, 20 M.

16.† **Theoretical Mechanics.** (5 Hrs.) Lectures and laboratory work. Open to seniors and graduate students. Prerequisites: Physics 1, 2, 3, 4 or 6, 8, 2, 4, and integral calculus.

First semester; hours to be arranged; Assistant Professor George, 15 M.

18.† **Heat and Wave Motion.** (5 Hrs) Lectures and laboratory work. Open to seniors and graduate students. Prerequisites: Physics 10 and integral calculus.

Second semester; hours to be arranged; Assistant Professor George, 15 M.

20.† **Electricity and Magnetism.** (5 Hrs.) Lectures and laboratory work. Open to seniors and graduate students. Prerequisites: Physics 10 and differential equations.

First semester; hours to be arranged; Professor Waggoner, 16 M.

21.† **Electricity and Magnetism.** (5 Hrs.) A continuation of Course 20 which is a prerequisite.

Second semester; hours to be arranged; Professor WAGGONER, 16 M.

22.† **Physics Seminar.** (1 Hr.) Open to seniors and graduate students. A discussion of the modern researches in physics. Papers will be presented by various members of the staff as well as by the students. A reading knowledge of both French and German is highly desirable.

First semester; hours to be arranged; Professor WAGGONER, 16 M.

23.† **Physics Seminar.** (1 Hr.) A continuation of 22.

Second semester; hours to be arranged; Professor WAGGONER, 16 M.

Courses Open Only to Graduate Students.

30. (G) **Physical Optics.** (3 Hrs.)

First semester; hours to be arranged; Professor MOLBY, 21 M.

31. (G) **Physical Optics.** (3 Hrs.)

Second semester; hours to be arranged; Professor MOLBY, 21 M.

32. (G) **Kinetic Theory of Gases and Molecular Physics.** (3 Hrs.)

First semester; hours to be arranged; Assistant Professor GEORGE, 15 M.

33. (G) **Kinetic Theory of Gases and Molecular Physics.** (3 Hrs.) Continuation of Course 32.

Second semester; hours to be arranged; Assistant Professor GEORGE, 15 M.

34. (G) **The Electron Theory.** (3 Hrs.)

First semester; hours to be arranged; Assistant Professor GEORGE, 15 M.

35. (G) **The Electron Theory.** (3 Hrs.) Continuation of Course 34.

Second semester; hours to be arranged; Assistant Professor GEORGE, 8 M.

36. (G) **Radio-Activity.** (3 Hrs.)

First semester; hours to be arranged; Professor MOLBY, 16 M.

37. (G) **Radio-Activity.** (3 Hrs.) Continuation of Course 36.

Second semester; hours to be arranged; Professor MOLBY, 16 M.

38. (G) Conduction of Electricity Through Gases. (3 Hrs.)

First semester; hours to be arranged; Professor Waggoner, 20 M.

39. (G) Conduction of Electricity Through Gases. (3 Hrs.) Continuation of Course 38.

Second semester; hours to be arranged; Professor Waggoner, 20 M.

40. (G) Experimental Research. (Credit according to work done but not to exceed 10 hours in all). Required of all graduates for the master of arts degree with major in physics.

Both semesters; hours to be arranged; Professor Waggoner, 16 M.

NOTE.—Not more than one of the purely graduate courses offered by any one instructor will be given in any one semester.

It is highly desirable that candidates for the master's degree should have a reading knowledge of both French and German.

PUBLIC SPEAKING.

Professor KAY and Miss STEADMAN.

Voice Training and Gesture.

3. General Course. (2 Hrs.) Fundamentals of good elocution.
Both semesters; T. Th., 8:00, 9:00; Miss STEADMAN.

4. Declamation. (2 Hrs.) Prerequisite: Course 3.
Both semesters; T. Th., 10:00; Miss STEADMAN.

5. Advanced Declamation. (2 Hrs.) Prerequisite: Course 4.
First semester; T. Th., 11:00; Professor KAY.

Original Address.

12. Effective Speaking. (3 Hrs.) The principles of psychology applied to the problems of the public speaker.
Both semesters; M. W. F., 9:00; Professor KAY.

13. The Occasional Address. (2 Hrs.) Prerequisite: Course 12.
First semester; T. Th., 9:00; Professor KAY.

14. Argumentation. (2 Hrs.) For Juniors and Seniors.
Both semesters; T. Th., 10:00; Professor KAY.

15. Debating. (2 Hrs.) Prerequisite: Course 14.
Second semester; T. Th., 9:00; Professor KAY.

10. Extempore Speaking. (3 Hrs.) Prerequisite: Course 12 except for seniors.
Both semesters; M. W. F., 11:00; Professor KAY.

11. Impromptu Speaking. (2 Hrs.) Prerequisite: Course 10.
Second semester; T, Th., 11:00; Professor KAY.

Literary Interpretation and Dramatics.

21. The Art of Reading Aloud. (3 Hrs.) Prerequisite: Courses 3 and 4.
First semester; M. W. F., 9:00; Miss STEADMAN.

22. The Reading of Dramatic Literature. (Plays, short stories, and stories, and cuttings from novels. Prerequisite: Course 21.
Second semester; M. W. F., 9:00; Miss STEADMAN.

23. Actional Study of Classic Drama. (3 Hrs.) For juniors and seniors. Prerequisite: Courses 3 and 4.
First semester; M. W. F., 11:00; Miss STEADMAN.

24. **Actional Study of Modern Drama.** (3 Hrs.) For juniors and seniors. Prerequisites: Courses 3 and 4.
Second semester; M. W. F., 11:00; Miss STEADMAN.

31. **Special Work.** (2 Hrs.) Intercollegiate debating and oratorical contests, participation in public plays, or other assignments. Credit is given only for work supervised and directed by the head of the department. For sophomores.

32. **Special Work.** (2 Hrs.) For juniors.

33. **Special Work.** (2 Hrs.) For seniors.

RAILWAY AND HIGHWAY ENGINEERING.

Credit will be given in the College of Arts and Sciences for Courses 100 and 101 in land surveying offered in the College of Engineering. See the announcements of that college.

ROMANCE LANGUAGES AND LITERATURE.

Professor STATHERS, Professor DARBY, Assistant Professor SPIKER, Mr. BRUNETTI, Mr. MITRANI, and Mr. FOREST.

French.

1. **Elementary French.** (5 Hrs.) Primarily for freshmen. Grammar reading and composition. Fraser and Squair's French Grammer.

First semester; sections, M. T. W. Th. F., at 8:00, 10:00 and 11:00; Professor DARBY, Mr. BRUNETTI and Mr. FOREST.

2. **Modern French.** (5 Hrs.) Primarily for freshmen. A continuation of Course 1. Grammar, reading, composition and oral understanding.

Second semester; sections, M. T. Th. F., at 8:00, 10:00, 11:00; Professor DARBY, Mr. BRUNETTI and Mr. FOREST.

3. **Fiction of the Nineteenth Century.** (3 Hrs.) For freshmen and sophomores. Reading and study of representative works of leading novelists.

First semester; sections, M. W. F., at 9:00, 10:00, 11:00, 4:00; Assistant Professor SPIKER, Mr. BRUNETTI, Mr. MITRANI, Mr. FOREST.

4. **Advanced Grammar and Composition.** (2 Hrs.) For freshmen and sophomores. Given in connection with Course 3.

First semester; sections, T. Th., 8:00, 9:00, 10:00, 11:00; Professor DARBY, Assistant Professor SPIKER, Mr. MITRANI, Mr. FOREST.

5. **France and the French.** (3 Hrs.) For freshmen and sophomores. Study of the country from a social, commercial and geographical standpoint; conversation in French on questions of popular interest.

Second semester; sections, M. W. F., 9:00, 10:00, 11:00, 4:00; Assistant Professor SPIKER, Mr. BRUNETTI, Mr. MITRANI, Mr. FOREST.

6. **Drama of the Nineteenth Century.** (2 Hrs.) For freshmen and sophomores. Reading and study of several plays chosen from the works of leading dramatists. Given in connection with Course 5.

Second semester; sections, T. Th., 8:00, 9:00, 10:00, 11:00; Professor DARBY, Assistant Professor SPIKER, Mr. MITRANI.

7. **The Classic School.** (3 Hrs.) For sophomores and juniors. This course includes the study of the origin and development of classic literature and the lives and works of the leading authors from the Pleiade to Moliere.

First semester; first section, M. W. F., 9:00; Professor DARBY, 14 W.; second section, M. W. F., 11:00; Assistant Professor SPIKER, 13 W.

8. **The Classic School after Moliere.** (3 Hrs.) For sophomores and juniors. A continuation of Course 7, comprising the study of the remaining authors of the seventeenth century and the principal authors of the eighteenth century.

Second semester; first section, M. W. F., 9:00; Professor DARBY, 14 W.; second section, M. W. F., 11:00; Assistant Professor SPIKER, 13 W.

9. **French Syntax and Conversation.** (2 Hrs.) For sophomores and juniors. Careful review of the parts of speech. Conversation based on anecdotes and short stories both original and from texts.

First semester; T. Th., 9:00; Professor STATHERS, 11 W.

10. **Advanced French Discourse.** (2 Hrs.) For sophomores and juniors. A continuation of Course 9. Study and application of idomatic construction in order to acquire facility in expression both in writing and in speaking.

Second semester; T. Th., 9:00; Professor STATHERS, 11 W.

NOTE.—At least seven of the preceding courses are prerequisite to Courses 11 to 22, which, as far as it is convenient, are given in French.

11. **Romantic Movement.** (3 Hrs.) For seniors and graduates.

First semester; M. W. F., 10:00; Professor STATHERS, 11 W.

12.—**French Literature Since 1850.** (3 Hrs.) For seniors and graduates. Continuation of Course 11.

Second semester; M. W. F., 10:00; Professor STATHERS, 11 W.

13.† **The Novel in France.** (2 Hrs.) For seniors and graduate students.

First semester; T. Th., 11:00; Assistant Professor SPIKER, 13 W.

14.† **French Lyric Poetry.** (2 Hrs.) For seniors and graduate students.

Second semester; T. Th., 11:00; Assistant Professor SPIKER, 13 W.

15.† **Early French Drama.** (3 Hrs.) Open to seniors and graduate students. (Omitted 1922-23).

First semester; M. W. F., 11:00; Professor STATHERS, 11 W.

16.† **Advanced Composition and Phonetics.** (3 Hrs.) Open to seniors and graduate students.

Second semester; M. W. F., 11:00; Professor STATHERS, 11 W.

17.† **Contemporary French Drama.** (2 Hrs.) For seniors and graduate students. (Omitted 1922-23).

First semester; T. Th., 10:00; Professor DARBY, 18 W.

18.† **Topic from Nineteenth Century Literature.** (2 Hrs.) For seniors and graduate students. (Omitted 1922-23).

Second semester; T. Th., 10:00; Professor DARBY, 18 W.

19. (G) **Historical French Grammar.** (3 Hrs.) Primarily for graduate students. (Omitted 1922-23).

20.† **Literature of the Sixteenth Century.** (3 Hrs.) Open only to seniors and graduate students.

First semester; M. W. F., 11:00; Professor STATHERS, 11 W.

21. (G) **Old French.** (3 Hrs.) Open only to gradate students. (Omited 1922-23).

22. (G) **Literature of the Middle Ages.** (3 Hrs.) Open only to graduate students. (Omitted 1922-23).

Italian.

31. **Elementary Italian.** (3 Hrs.) Primarily for sophomores and juniors. Marinoni's Italian Grammar and Italian Reader.

First semester; M. W. F., 9:00; Mr. BRUNETTI, 49 W.

32. **Modern Italian.** (3 Hrs.) Primarily for sophomores and juniors. A continuation of Course 31. Reading in class of Manzoni's I Promessi Sposi and selections from other modern authors. Composition, dictation and conversation.

Second semester; M. W. F., 9:00; Mr. BRUNETTI, 49 W.

NOTE.—Second year courses in Italian are offered when there is sufficient demand for them.

Spanish.

41. **Elementary Spanish.** (5 Hrs.) For freshmen and sophomores. Hill and Ford's First Spanish Course and Roessler and Remy's First Spanish Reader.

First semester; first section, 8:00; Professor DARBY, 14 W.; second section, 10:00; Assistant Professor SPIKER, 13 W.; third section, 11:00; Mr. MITRANI, 19 W.

42. **Modern Spanish.** (5 Hrs.) Reading and study of three or four works selected from well known authors. Composition and conversation.

Second semester; first section, 8:00; Professor Darby, 14 W.; second section, 10:00; Assistant Professor Spiker, 13 W.; third section, 11:00; Mr. Mitrani.

43.† **The Novel in Spain.** (3 Hrs.) Primarily for seniors and graduates.

First semester; M. W. F., 9:00; Professor Stathers, 11 W.

44.† **Drama of the Golden Age.** (3 Hrs.) Primarily for seniors and graduates.

Second semester; M. W. F., 9:00; Professor Stathers, 11 W.

45. **The Drama of the Nineteenth Century.** (2 Hrs.) For sophomores and juniors.

First semester; first section; T. Th., 8:00; Mr. Mitrani, 49 W.; second section, T. .Th., 11:00; Professor Stathers, 11 W.

46. **Spanish Grammar and Conversation.** (2 Hrs.) For sophomores and juniors.

Second semester; first section, T. Th., 8:00; Mr. Mitrani, 49 W.; second section, T. Th., 11:00; Professor Stathers, 11 W.

47. **(G) Early Spanish Drama.** (3 Hrs.) Open only to graduate students. (Omitted 1922-23).

First semester; M. W. F., hours to be arranged; Professor Stathers, 11 W.

48. **(G) Early Spanish.** (3 Hrs.) Open only to graduate students. (Omitted 1922-23).

Second semester; M. W. F., hours to be arranged; Professor Stathers, 11 W.

49. **Latin America.** (3 Hrs.) For sophomores and juniors. Study in Spanish of the lands and people from a geographical and historical standpoint with conversation in Spanish based on the texts read.

First semester; M. W. F., first section, 8:00; second section, 10:00; Mr. Mitrani, 19 W.

50. **Contemporary Novel.** (3 Hrs.) For sophomores and juniors.

Second semester; M. W. F., first section, 8:00, second section, 10:00; Mr. Mitrani, 19 W.

ZOOLOGY.

Professor REESE, Assistant Professor CHIDESTER and Mr. HICKMAN.

NOTE.—For description of zoological laboratories see page 25.

The courses in this department are intended to serve as a means of general culture and to prepare students to become investigators and teachers of zoology. Courses 1, 2, 9 and 10 are of especial interest to teachers. Courses 1 and 2 are required of students preparing to enter the study of medicine.

1. **Animal Biology.** (4 Hrs.) A study chiefly of invertebrate animals, with an introduction to the vertebrates. Hegner's College Zoology.

First semester; recitation, T. Th., 8:00; or T. Th., 9:00; laboratory, first section (primarily for students in agriculture), M. F., 2:00-4:300; second section, T. Th., 2:00-4:30; third section, W., 2:00-4:30; S., 8:30-11:00; Professor REESE, Associate Professor CHIDESTER and Mr. HICKMAN, 49, 50 and 51 W.

2. **Vertebrate Zoology.** (4 Hrs.) Dissection of the dogfish, frog, and rat. Lecture and recitations upon the biology, comparative anatomy, and evolution of vertebrates. Prerequisite: Zoology 1 or an equivalent.

Second semester; recitation, T. Th., 8:00, or T. Th., 9:00; laboratory, first section (primarily for students in agriculture), M. F., 2:00-4:30; second section, T. Th., 2:00-4:30; third section, W., 2:00-4:30; S., 8:30-11:00; Professor REESE, Assistant Professor CHIDESTER and Mr. HICKMAN, 49, 50 and 51 W.

6. **Vertebrate Embryology.** (3 Hrs.) Reese's Vertebrate Embryology. Prerequisite: Course 2 or an equivalent.

First semester; T. Th., 2:00-5:00; Professor REESE, 47 W.

9. **Methods of Zoology.** (2 or 3 Hrs.) A practical course in the methods of collecting, preserving, injecting, making microscopic preparations, etc. Lectures and laboratory work. Guyer's Animal Micrology. Prerequisite: Courses 1 and 2 or an equivalent.

Second semester; M. F., 2:00-5:00; Associate Professor CHIDESTER, 47 W.

10.† **Principles of Biology.** (3 Hrs.) Primarily for upper-classmen. This course deals with the conditions of animal life; habits, reactions, food relations, regeneration, etc.; the course of organic evolution; eugenics, etc. Lectures, recitations and assigned readings. Newman's Evolution, Genetics and Eugenics. Prerequisite: Zoology 1 or an equivalent, except by special permission.

This course may count towards a minor subject in graduate work by arranging with the instructor for additional work.

Second semester; M. W. F., 11:00; Associate Professor CHIDESTER, 46 W.

15.† **Comparative Anatomy, Histology, and Embryology.** (Credit in proportion to work done.) An advanced course; to be taken ordinarily only after most of the preceding courses have been completed.

First semester; M. F., 2:00-5:00; Associate Professor CHIDESTER, 47 W.

19. (G) **Current Literature.** (1 Hr.) Open to seniors and graduate students. The purpose of this course is to familiarize the student with the character of the work that is being published in the best known American and foreign zoological journals.

First and second semester; hours to be arranged; Professor REESE, 47 W.

20. (G) **Research Work.** (Credit in proportion to work done).

First and second semesters; hours to be arranged; Professor REESE and Associate Professor CHIDESTER, 47 W.

21. **Economic Zoology.** (2 Hrs.) A brief survey of the more important representatives of all the groups of animals that are economically beneficial or injurious to man. Lectures, recitations and assigned readings. Reese's Economic Zoology. Zoology 1 and 2 advised as prerequisite, but not required of upper classmen.

Second semester; T. Th., 11:00; Professor REESE, 46 W.

23. (G) **Comparative Anatomy, Histology, and Embryology.** (Credit in proportion to work done). A continuation of Course 15.

First and second semesters; hours to be arranged; Professor REESE, Associate Professor CHIDESTER, and Mr. HICKMAN, 47 W.

NOTE.—For courses in entomology see announcement of courses offered in the College of Agriculture.

The College of Engineering and Mechanic Arts

THE FACULTY.

FRANK BUTLER TROTTER, A.M., LL.D., *President of the University.*

CLEMENT ROSS JONES, B.S.C.E., M.M.E., *Dean and Professor of Power Engineering*

RUSSELL LOVE MORRIS, C.E., *Professor of Railway and Highway Engineering*

ROLAND PARKER DAVIS, M.C.E., PH.D., *Professor of Structural and Hydraulic Engineering*

JOHN BEHNY GRUMBEIN, M.M.E., *Professor of Steam and Experimental Engineering*

ALEXANDER HARDIE FORMAN, M.M.E., PH.D., *Professor of Electrical Engineering*

ALFRED COPELAND CALLEN, E.M., M.S., *Professor of Mining Engineering and Director of Mining Extension*

LESLIE DAVID HAYES, B.S., M.E., *Professor of Machine Design and Construction*

GEORGE PAUL BOOMSLITER, M.S., *Professor of Mechanics*

WILLARD WELLINGTON HODGE, M.A., *Professor of Chemical Engineering*

JAMES HERBERT GILL, B.M.E., M.E., *Professor of Machine Construction and Superintendent of Shops*

EDWARD SILVER MACLIN, B.S.E., *Professor of Industrial Education*

ARTHUR ADAMS HALL, B.S.M.E, *Associate Professor of Electrical Engineering*

GEORGE WALTER GROW, B.S.M.E., B.S., *Assistant Professor of Drawing and Machine Design*

CAMDEN PAGE FORTNEY, B.S.C.E., *Chief Engineer, State Road Commission, Director of School of Good Roads*

BENNETT SEXTON WHITE, B.S.M.E., *Assistant Professor of Drawing and Machine Design*

RUFUS ASA WEST, *Instructor in Metalworking*

RAYMER EGBERT SEAMAN, *Instructor in Woodworking and Foundry Practice*

HAROLD MALCOLM CATHER, B.S.M.E., *Instructor in Drawing and Machine Design*

ARTHUR TAYLOR BRAGONIER, B.S.C.E., *Instructor in Surveying*

WILLIAM J. CARL, *Instructor in Foundry Practice*

FRANK BROOKS, *Instructor in Drawing*

WILLIAM OLIVER GNAGEY, *Instructor in Machine Shop Practice*

ROY EZEKIEL NELSON, B.S.C.E., *Instructor in Surveying*

ARCHER RICE NORCROSS, A.B., B.S.C.E., *Instructor in Structural and Hydraulic Engineering*

CHARLES ELMER LAWALL, E.M., M.S., *Instructor in Mining Engineering*

[1]JUNIUS CAMPBELL EARLY, C.E., *Instructor in Mechanics*

HOY JAY WALLS, B.S.E.E., *Instructor in Electrical Engineering*

CHARLES DENISON KERSLAKE, C.E., *Instructor in Mechanics*

HERMAN DELOSS STILLMAN, *Assistant in Woodworking*

ALVIN MARTIN MILLER, B.S.M.E., *Assistant in Steam and Experimental Engineering*

JOHN JARRETT KNIGHT, B.S.M.E., *Assistant in Drawing*

CHARLES MICHAEL RUNNER, *Stationary Engineer*

MARY BELLE LORENTZ, *Secretary to the Dean*

CHARLES KEPLER BROWN, *Assistant Director of Mining Extension*

ADAM CRAWFORD, *Instructor in Mining Extension*

WILLIAM NORRIS, *Instructor in Mining Extension*

LOUIS C. HUTSON, *Instructor in Mining Extension*

FRED CHARLES KLAAS, *Instructor in Mining Extension*

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[1]Resigned, October 27, 1921.

EVANS ENGLE CRISWELL, *Instructor in Mining Extension*

[2]THOMAS H. QUEER, *Instructor in Mining Extension*

JAMES B. BENSON, *Local Instructor in Mining Extension*

FRANK MAURICE, *Instructor in Mining Extension*

W. GRAHAM CARPENTER, *Local Instructor of Extension Classes in Teacher Training, Wheeling, W. Va.*

FACULTY COMMITTEES.

STUDENTS' COURSES AND HOURS: Dean JONES and Professors GRUMBEIN and FORMAN.

ENGINEERING CURRICULA: Dean JONES, Professors MORRIS, DAVIS, FORMAN, CALLEN, HAYES, HODGE and MACLIN.

ENGINEERING SOCIETY: Professors GRUMBEIN, MORRIS, FORMAN, CALLEN, BOOMSLITER, HAYES and HODGE.

LIBRARY: Professors DAVIS and HAYES.

ORGANIZATION.

The College of Engineering contains the following departments:

Chemical engineering.

Electrical engineering.

Machine design and construction.

Mechanics.

Mining engineering.

Railway and highway engineering and surveying.

Steam, gas, and experimental engineering.

Structural and hydraulic engineering.

Industrial education.

Summer school of mines.

School of good roads.

Mining extension.

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[2]Resigned February 17, 1922.

BUILDINGS AND EQUIPMENT.

All instruction in engineering subjects is centralized in Mechanical Hall. This building is located on the southeast corner of the campus and fronts on the athletic field.

In this building are the offices, recitation and lecture rooms, general departmental drawing rooms, the shops, laboratories and museums of the College of Engineering; recitation, laboratory and model rooms for the department of geology; offices and drawing rooms for the Division Engineer and the Testing Engineer of the State Road Commission and offices for the State Geological Survey.

In the drawing rooms are collections of models of structures, mechanisms, charts, state and government maps, surveys, photographs, engineering specifications, drawings, tracings, and blue prints. In connection with the drawing rooms there are blue printing and photographic rooms equipped with electric and sun printing apparatus, photostat and photographic outfit.

The shops consist of a woodworking shop, forge shop, foundry, machine shop, sheet metal shop, pipe fitting shop, automobile repair shop and an acetylene welding plant. Each workshop occupies a separate room and is independently equipped, with suitable benches, measuring instruments, tools, shop appliances and machines, such as are ordinarily installed in the larger engineering colleges and commercial shops.

A variety of semi-automatic and full automatic machines provides unusual opportunity for the study of modern production methods.

The power plant equipment consists of different types of steam and gas engines, direct connected or belted to electric generators; a 100 K. W. Westinghouse condensing steam turbine direct-connected to a direct current generator; a 50 h. p. motor-generator set; steam boilers, equipped for burning both gas and coal; an independently fired superheater equipped with temperature controller; pumps, condensers, air compressors, steam traps and other auxiliary apparatus, providing the means for furnishing any desired kind of power.

The engineering laboratories are supplied with standard gauges, measuring, calculating, and recording instruments; apparatus and appliances for qualitative and quantitative experimental work in civil, mechanical, steam, hydraulic, electrical and mining engineering.

The testing laboratory is equipped with apparatus and machines for testing cement, iron, steel, brick, stone, and other materials of engineering. The principal machines and apparatus are an Olsen testing machine of 400,000 pounds capacity, taking tension and compression specimens up to six feet, and beams up to sixteen feet in length; a 50,000 pound Riehle testing machine; a 20,000 pound Riehle automatic and autographic testing machine; a 10,000 pound Olsen

transverse testing machine; a 60,000 inch-pound Riehle-Miller torsion machine; one Olsen and two Fairbanks cement testers; Brinnell and Shore hardness testers; a standard abrasion cylinder; a stone saw; besides smaller apparatus for testing cement, lubricating oils, and extension and deflection of materials.

The mechanical and steam laboratories contain small steam and gas engines, a compound air compressor with electrical and mechanical control, Westinghouse air brake apparatus, rotary air motors, a hot air engine, direct steam driven ventilating and power driven fans, dynamometers, friction brakes, condensers, injectors and ejectors, steam and gas engine indicators, revolution counters, planimeters, anemometers and apparatus for testing pressure gauges, indicator springs, thermometers, Venturi meters and nozzles for measuring flow of air and steam, etc. These are supplemented by the power plant equipment previously described, which affords facilities for steam and gas engine trials and boiler tests with larger units, and also provides facilities for various lines of experimental investigation.

In addition to the larger generating and control units in the power plant, the electrical laboratory is provided with a number of compound, shunt and series wound direct current generators and motors, ranging from fractional-horsepower motors to 20-kilowatt generators, single and poly-phase alternating current generators and motors of frequencies from 20 to 133 cycles and capacities ranging from fractional-horsepower motors to 20-kilowatt generators; rotary-convertor and motor generator sets; rectifiers, storage batteries, speed regulating and controlling apparatus; reactances, auto, constant voltage and constant current transformers, Tesla transformers and other experimental apparatus for demonstrating many of the principles of electricity; instruments and accessories such as tachometers, slip meters, frequency meters, etc.; a G. E. ascillograph; telephone equipment including two magneto P. B. exchanges and a circuit model of the common battery exchange; a Macbeth illuminometer; laboratory precision standards for calibration of D. C. and A. C. instruments; electric railway equipment consisting of a truck, motors, air brake equipment, three types of control equipment and a switchboard panel with indicating and recording instruments.

The hydraulic laboratory equipment consists of a compound duplex steam pump supplying water to a closed steel pressure tank, from which run headers arranged for the insertion of orifices, nozzles, and pipes supplying the various hydraulic motors; concrete storage tanks; measuring tanks and weighing scales; cascade water wheel; Venturi meter, water meter steel weir-box weir-gauges, and other minor measuring and controlling apparatus.

The road material testing laboratory equipment consists of standard abrasion cylinder for testing paving brick; a standard three-

gang motor driven Deval abrasion cylinder; motor driven ball mill; briquette machine; core drill; motor driven grinding lap and stone saw; motor driven "Dorry" hardness testing machine; standard Page impact tester, with anvil for cementation tests; road-making tools. Braun planetary pulverizer; Dulin roterex; motor driven sieve shaker, etc.

The mining laboratory is equipped with drills, coal cutting machinery, air receiver, etc.; leading types of mining rescue apparatus, pulmotor, smoke chamber for use in training with rescue apparatus, devices for demonstrating the explosibility of coal dust, the William Clifford-James T. Beard collection of safety lamps, device for showing the length of cap with varying percentages of methane in mine air, models showing methods of working anthracite and bituminous seams of coal, small mine fan for experimental use in the study of mine ventilation, recording barometer, hygrometer, etc. Additional equipment has been installed to permit washing and concentrating tests on coal, pyrite, etc. A 7½x10½ Blake crusher discharges into the boot of a Jeffrey bucket elevator. The material may be sent from the elevator to either a 30-inch trommel or a 24-inch shaking screen; these screens have 1, ¾, ½ and ¼-inch round holes, and the screened products are discharged into bins. A pair of 8x5 inch Sturtevant rolls can be used for fine crushing. A two-compartment Harz jig and a Richards pulsator jig comprise the present jigging equipment, while a Butchart table is provided for the treatment of material too fine for the jigs. A small Jeffery-Robinson coal washer can be used for demonstration and testing work, and its performance, or the performance of the jigs and tables, can be checked up by sink-and-float test machines. A bench has been equipped with crushers and grinders so that the samples from the laboratory may be prepared at once for chemical analysis.

The metallurgical laboratory is especially equipped for the study of fuels, such as coal, coke, gas and oil. In part it comprises analytical balances, Cary combination gas furnace, electric dyring oven, water still, Emerson and Parr fuel calorimeters, apparatus for the analysis of gases, apparatus for the proximate analysis of coal and for determining the coking properties, etc.

The oil and gas laboratory is provided with equipment for determining the physical and chemical properties of oils and gases, as follows: Junker calorimeter, Emerson calorimeter, Saybolt standard Universal viscosometer, Pensky-Martin flash point apparatus, calorimeter, apparatus for heat test, fire test, cold test and emulsion test; Baume hydrometers; apparatus for the determination of carbon residue in oils; the estimation of gasoline content per 1000 cubic feet of natural gas, etc., etc.

Transits, levels, compasses, etc., are provided for the use of

students in land and mine surveying and in highway and railway construction.

The laboratories for chemical engineering and industrial chemistry are equipped for small scale production of certain commercial chemicals and for the analysis of industrial and engineering materials including special apparatus for by-product tests, water purification and metallographic work. A number of manufacturers' displays add to the facilities for instruction.

The latest trade literature, catalogues, and reports of commercial developments in engineering are kept in classified files for students' reference. The University library has a thoroughly classified and indexed collection of the standard and latest books in engineering and the allied sciences, complete bound sets of the transactions of several scientific and engineering societies, and current issues and bound volumes of the principal scientific and technical periodicals.

These include the extensive technical library recently donated by Mrs. F. L. Emory as a nucleus for a memorial to her husband, Professor Frederick Lincoln Emory, deceased.

FACILITIES FOR PRACTICAL OBSERVATION.

The University is located in a region which affords the student unusual opportunities for practical observation and education in engineering. Morgantown is practically in the center of an extensive coal region in which are large workings of the Pittsburgh, Sewickly and upper Freeport seams while nearby are the Fairmont and Connellsville fields. West Virginia's gas and oil district approach within four miles of the city. The region abounds with rich deposits of glass sand, limestone, clays, shales and valuable building stone.

Within the city limits or in nearby towns are numerous factories and plants, including large central stations for the production of electric power, cement plant, tin plate mills, extensive glass factories manufacturing glass of every description, brick plants, by-product coking plant, brass plant, brass and iron foundries, large oil and gas pumping stations, glass sand and limestone crushing plants, etc. Connellsville is only 45 miles from Morgantown and Pittsburgh, the center of the world's greatest iron and steel industries, is only 103 miles distant.

ENGINEERING SOCIETY.

The Engineering Society is conducted by the students of the College of Engineering under the direction of a faculty committee. The society meets bi-weekly for the discussion of scientific subjects. All engineering students are urged to join the society immediately upon entrance to the college and to perform such work as its rules require.

Students taking any of the four-year curricula leading to the baccalaureate degrees in engineering are required to engage actively in the work of the society during the third and fourth years. A credit of one hour will be given for the work of each of the last two years.

AMERICAN SOCIETY OF CIVIL ENGINEERS.

The Student chapter of the American Society of Civil Engineers holds weekly meetings during the school year. Alternate meetings are devoted to papers prepared by members of the chapter and lctures by members of the faculty and outside engineers. Membership is open to students in the department of cicil engineering.

AMERICAN INSTITUTE OF ELECTRICAL ENGINEERS.

The West Virginia University Student Branch of the American Institute of Electrical Engineers holds monthly meetings during the college year. Membership is open to students in the department of electrical engineering.

AMERICAN INSTITUTE OF MINING AND METALLURGICAL ENGINEERS.

An affiliated student society of the American Institute of Mining and Metallurgical Engineers is maintained in the College of Engineering. Meetings are held every two weeks. Membership is open to all students in mining engineering.

TUITION, FEES AND INSTRUMENTS.

All engineering students must pay the following fees at the opening of each semester: contingent fee, $12.50; medical fee, $2.50; student activity fee, $5.00; registration fee, $2.00. The registration fee is remitted to all students who complete the registration during the first three days of the first semester and the first two days of the second semester.

Tuition is free to residents of West Virginia, but for students not residents of West Virginia the tuition fee is $50.00 a semester.

A diploma fee of $10.00 must be paid by all students at the beginning of the semester in which they expect to receive their degree.

All students must furnish their own drawing instruments. These should be of good grade for accurate work during the full course of study and for work after graduation. Students who prefer may purchase all instruments needed at the University at a cost much below the retail prices. The present cost of instruments of the grade desired is approximately $25.00. Instruments suitable for temporary use only can be furnished at a cost of about $15.00.

ENTRANCE REQUIREMENTS.

For admission to the College of Engineering, the candidate must have credit, obtained by examination or on certificate, for fifteen units of secondary school work, i. e., the work of a standard four-year high school.

A. The following groups are required:
   (1) Four units of English.
   (2) Three units in one other subject.
   (3) Two units in a third subject.
   (4) Two units in a fourth subject.
   (5) Four units elective.

B. In addition to the four units of English the work indicated in (A) must include: one and one-half units of algebra, one unit of plane geometry and one-half unit of solid geometry.

C. Work in the following subjects not to exceed the number of units placed after each subject will be accepted:

English	4 units	Science[4]	
		Physics	1 unit
Foreign Languages[2]		Chemistry	1 unit
Latin	4 units	Biology	1 unit
Greek	3 units	Botany	1 unit
French	3 units	Geology	1 unit
German	3 units	Zoology	1 unit
Spanish	2 units	General Science	1 unit
Italian	2 units	Physical geography	½ unit
		Physiology	½ unit
Mathematics		Hygiene and sanitation	½ unit
Algebra	1½ units		
Plane Geometry	1 unit	Vocational subjects (not to exceed four units in all.)	
Solid geometry	½ unit	Agriculture	3 units
Trigonometry	½ unit	Household arts	3 units
		Manual training	3 units
History and economics		Bookkeeping or bookkeeping and commercial arithmetic	2 units
Mistory	3 units		
Civics	1 unit	Shorthand and typewriting	2 units
Elementary economics and sociology	1 unit	Commercial geography	½ unit
		Commercial law	½ unit
Education	2 units		
		Music:—violin, organ or piano	2 units
Drawing			
Free-hand drawing	1 unit		
Mechanical drawing	1 unit		

[2]Students are advised to present at least two units in one foreign language, one unit in history and one unit in physics. Students offering less than one and one-half units in algebra must make up the shortage before entering the class in college algebra. Solid geometry, when not offered, must be made up before the beginning of the second year.

[3]Not less than two units of one foreign language will be accepted for entrance.

[4]A group of two units in science may be made by combining one unit each of physics and chemistry or one unit each of any two of the following: biology, botany, zoology, geology. A group of three units in science may be made by combining one unit each of any three of the following: physics, chemistry, biology, botany, zoology, geology.

ADMISSION WITH ADVANCED STANDING.

Students from other institutions will be given credit for work already done in accordance with the general rules for advanced standing, but at least one year of resident work will be required for any of the baccalaureate degrees in engineering.

ADMISSION AS SPECIAL STUDENTS.

Students over twenty-one years of age desiring to take special work in the College of Engineering and Mechanic Arts are required to present nine units for entrance and to conform to the general regulations of the University regarding special students. (See University Catalogue).

Such students must give satisfactory evidence that they are prepared to take the desired studies advantageously; but if they subsequently desire to become candidates for a degree or to take a regular curriculum in engineering, they must pass the required entrance examination for that year. Special provisions are made for disabled soldiers and those taking strictly vocational courses.

CLASSIFICATION OF STUDENTS.

To be classified as a freshman in the College of Engineering a student must have credit for at least 15 units of entrance requirements; to be classified as a regular freshman he must have fulfilled all entrance requirements: To be classified as a sophomore he must have credit for twenty-eight hours of college work; as a junior, sixty-eight hours; as a senior, one hundred and eight hours.

CREDIT FOR WORK DONE IN ABSENCE.

Students of the College of Engineering under exceptional circumstances are permitted to apply for advanced standing for not more than a total of six hours credit for practical work in the following subjects done in the field, shops, or drafting room, during vacation or other periods of absence from the University: woodworking (courses 1, 2 and 3), pattern making (4), foundry practice (5), forging (7), shop work (9), pipe fitting (10), machine tool work (13 and 14), machine construction (15), electrical construction (610), mechanical drawing (20, 22, 24 and 25), surveying (109 and 110).

To obtain credit application must be made before the work is begun, and a daily record kept of the work done. A certified statement of work done signed by the employer accompanied by a full report prepared by the applicant, must be filed with the Dean of the College on or before October 1st. Rules of procedure and application blanks may be obtained from the Dean.

In order to obtain credit for Summer Practice 164, the same rules of procedure apply.

UNDERGRADUATE CURRICULA.

1. A four-year curriculum leading to the degree of Bachelor of Science in Civil Engineering, with option in sanitary engineering.
2. A four-year curriculum leading to the degree of Bachelor of Science in Mechanical Engineering.
3. A four-year curriculum leading to the degree of Bachelor of Science in Electrical Engineering.
4. A four-year curriculum leading to the degree of Bachelor of Science in Engineering of Mines, with options in coal mining and oil and gas engineering.
5. A four-year curriculum leading to the degree of Bachelor of Science in Chemical Engineering.
6. A four-year curriculum in industrial education leading to the degree of Bachelor of Science.
7. Combined science and engineering curricula extending over five or more years leading to the degree of Bachelor of Science, and Bachelor of Science in Engineering.

REQUIREMENTS FOR DEGREES.

To receive any of the baccalaureate degrees conferred in the College of Engineering the student must have satisfied all the entrance requirements and with the exception of Curriculum No. 7 must have received credit for one hundred and forty-eight semester hours, including a summer term equivalent to five semester hours, three of which shall be in residence and two hours in outside practice. The particular curriculum and distribution of work is prescribed for each degree is stated below.

No student is permitted to register for less than fifteen or more than twenty hours of work in any one semester.

SPECIAL CURRICULA FOR STUDENTS WITH IRREGULAR PREPARATION.

The courses of study outlined on the following pages are intended for students who matriculate with full entrance requirements. Alternative curricula have been arranged for students who offer only one unit in algebra for entrance or who are otherwise not prepared to take college algebra and trigonometry, (Mathematics 3 and 4). Such students will take review algebra (Mathematics 1) for entrance credit and Mathematics 3, 4 and 6 in the freshman year; Mathematics 13 and 14 in the sophomore year; and Mechanics 76 and 77 in the junior year. Similar provisions are made for deficiencies in English and solid geometry.

THESES.

Any candidate for baccalaureate degrees in engineering may with the consent of his major professor prepare a thesis on some subject relating to a special branch of engineering or other department of applied science. It must be fully elaborated and accompanied by

the necessary working drawing or models required for the proper elucidation of the subject of the thesis. With its accompanying drawings it will be presented for approval, first to the instructor under whose guidance it has been prepared, then to the head of the department in which the degree is to be conferred. A typewritten copy of the thesis, prepared according to official specifications for thesis and signed by the instructor in charge and the head of the department, must be placed in the University library before graduation. A small fee is charged for binding.

CIVIL ENGINEERING.

The course in civil engineering has been planned so that the student will get a substantial foundation for the work of the civil engineer. Emphasis is placed on the subjects underlying the science of engineering, such as physics, mathematics, etc., and these subjects are presented to the engineering students, not as an end in themselves, but as a means for the solution of engineering problems. The professional subjects are taught by means of recitations, lectures, drawing room work, laboratory work and field work.

Civil engineering includes topographical and geodetic engineering, which has to do with the measurements of land surfaces; railroad and highway engineering, comprising the construction and maintenance of railroad lines and highways and the economic features governing them; municipal engineering, comprising the construction of sewers, water-works, etc., structural engineering, comprising the construction of buildings, bridges, foundations, docks, walls, piers and other fixed structures; and hydraulic engineering comprising the development of water power, the tranference of water from place to place, etc. The field is so broad that no man can ever become an expert over its whole extent, but fortunately all of these various branches rest upon a very small body of principles, and the student is not forced to specialize until he enters active practice.

In addition to the Sanitary Option, outlined below, the student is offered the choice of two options in the second semester of the senior year, one of which devotes more time to the subject of railroad and highway engineering, the other to the subject of hydraulic engineering.

OPTIONAL COURSE IN SANITARY ENGINEERING.

Students in Civil Engineering who desire to specialize in Sanitary Engineering are permitted to substitute: Chemistry 6 or 18. Qualitative and Quantitative Analysis (5 Hrs.); Organic Chemistry 9 (5 Hrs.); The Chemistry of Colloids 26 (2 Hrs); General Bacteriology 1 (3 Hrs.); Bacteriology 7, State and Municipal laboratory methods (2 Hrs.); and Microscopy of Drinking Water 159 (2 Hrs.), for an equal amount of credit in other required subjects but the subjects must be approved by the faculty.

NOTE: See page 13, Special curricula for students with irregular preparation.

UNDERGRADUATE CURRICULUM IN CIVIL ENGINEERING.

Leading to the Degree of Bachelor of Science in Civil Engineering.

First Year—First Semester.			First Year—Second Semester.		
Rhetoric and comp (Eng. 1)	3		Rhetoric and comp. (Eng. 2)	3	
Algebra and trigonometry (Math. 3 and 4)	5		Trigonometry and analytical geometry (Math. 5 and 6)	5	
Inorganic chemistry (Chem. 1)	4		Land surveying 100	3	
Military science (1)	1		Inorganic chemistry (Chem. 2)	4	
Mechanical drawing 20	2		Military science (2)	1	
Shop work 9	2	17	Mechanical drawing 22	2	18
Engineering Lectures					

Second Year—First Semester.			Second Year—Second Semester.		
Descriptive geometry 26	3		Integral calculus (Math. 8)	3	
Advanced surveying 102	2		General physics (Phys. 8, 4)	5	
General physics (Phys. 6, 2)	5		Topographical surveying 103	2	
Differential calculus (Math. 7)	3		Statics 70	3	
Military science (3)	1		Military science (4)	1	
Quantitative analysis (Chem. 4)	2		General geology (Geol. 2)	3	
Mechanical drawing 25	2	18	Laboratory geology (Geol. 21)	1	18

Summer work, Surveying 109—1.

Summer work (out of residence), Summer practice 164—2.

Third Year—First Semester.			Third Year—Second Semester.		
Mechanics of materials 71	4		Kinetics 72	3	
Mechanical laboratory 130	2		Hydraulics 73	2	
Railway location 104	3		Mechanical laboratory 131	2	
Heat engineering 120	3		Roofs and bridges 141	4	
Economic geology (Geol. 4)	3		Applied electricity 51	4	
Economics (Economics 115)	3		Money, banking and credit		
Engineering society 162		18	(Economics 105)	2	
			Engineering Society 162	1	18

Summer work, Railroad surveying 110—2

Fourth Year—First Semester.			Fourth Year—Second Semester.		
Railway maintenance 105	3		Masonry and foundation 146	3	
Water supply engineering 149	3		Sanitary engineering 148	2	
Materials of construction 156	2		Concrete construction 147	3	
Bridge design 142	4		Advanced structures 143	3	
Roads and pavements 106	3		Cost accounting (Econ. 125)	2	
Business law 161	3		English (Eng. 14)	1	
Engineering Society 163		18	Engineering Society 163	1	
			Options from the list below	3	18
Thesis 113 or 152	3		Railroad economy 107	3	
Highway engineering 108	3		Water power engineering 150	3	
			Industrial education 206	3	

MECHANICAL ENGINEERING.

The aim of the course in mechanical engineering is to give the student such mental equipment as will enable him to deal most effectively both technically and commercially with general engineering problems. All possible practice is given in the work that an engineer is ordinarily called on to do, but greater stress is laid on a thorough knowledge of those underlying principles and methods which are the foundation of all engineering professions. To this is added a study of those economic subjects which are essential to a thorough understanding of sound business methods. Options are provided in the fourth year which enable the student to specialize in accordance with his natural inclination.

The work in pure mathematics is terminated at the end of the second year, and applications follow in the recitation room courses in mechanism, statics, mechanics of materials, dynamics, and machine design. Steam engineering begins with the course in thermodynamics in the third year and is continued by the courses in heat engines and power plant design with options in the design of steam engines and turbines. A sufficient amount of electrical engineering is given in the third and fourth years to enable the student to handle engineering operations involving the simpler electrical problems.

Drafting room work is given throughout the four years, starting with elementary mechanical drawing in the first year. The courses in mechanism, machine design and power plant design are accompanied by drawing room work, giving practical applications of the principles studied in the class room, and constant practice in the execution of drawings.

The engineering laboratories provide the students with practice in testing, handling and caring for a large variety of machinery, including steam, air, gas, hydraulic, material-testing and power-transmission machinery. One-half day a week is devoted to this work during the last two years.

The shop work, commencing in the first year, is planned to acquaint students with the fundamental tools and mechanical operations, to enable them to acquire a reasonable amount of manual dexterity, and to furnish them continuously with practical examples of the principles studied in their class rooms. A study is made of the methods used in manufacturing plants and engineering establishments, and of the principles of industrial management.

The thorough understanding of principles, the development of the reasoning faculty, and the knowledge of the sources to draw on for engineering information as it may be needed, are of the greatest importance, and take precedence over the mere acquisition of knowledge.

NOTE: See page 13, Special curricula for students with irregular preparation.

UNDERGRADUATE CURRICULUM IN MECHANICAL ENGINEERING.

Leading to the Degree of Bachelor of Science in Mechanical Engineering.

First Year—First Semester.		First Year—Second Semester.		
Rhetoric and comp. (Eng. 1)	3	Rhetoric and comp. (Eng. 2)	3	
Algebra and trigonometry (Math. 3 and 4)	5	Trigonometry and analytical geometry (Math. 5 and 6)	5	
Inorganic chemistry(Chem.1)	4	Surveying 101	1	
Military Science (1)	1	Inorganic chemistry(Chem.2)	4	
Mechanical drawing 20	2	Military science (2)	1	
Woodworking 1 or Foundry 5	1	Mechanical drawing 22	2	
Forging 7	1	17 Foundry (5) or woodworking (1) and forging (7)	2	18
Engineering lectures				

Summer work, Machine shop 13—3

Second Year—First Semester.		Second Year—Second Semester.		
Differential calculus (Math. 7)	3	Integral calculus (Math. 8)	3	
General physics (Phys. 6, 2)	5	General physics (Phys. 8, 4)	5	
Descriptive geometry 26	3	Statics 70	3	
Military science (3)	1	Mechanism 29	4	
Quantitatitve analysis (Chem. 4)	2	Military science (4)	1	
Mechanical drawing 24	2	Machine work 14 and Pipe-fitting 10 or Pattern making 4	2	
Pattern making 4 or Machine work 14 and Pipe-fitting 10	2	18		

Summer work (out of residence), Summer practice 164—2

Third Year—First Semester.		Third Year—Second Semester.		
Mechanics of materials 71	4	Kinetics 72	3	
Thermodynamics 121	3	Hydraulics 73	2	
Elect. and mag. (Physics 10)	3	Heat engines 122	3	
Economics (Econ. 115)	3	Money, banking and credits, (Econ. 105)	2	
Mechanical laboratory 130	2	Machine design 35	2	
Machine construction 15	2	Mechanical laboratory 131	2	
Engineering society 162		17 Shop methods 16	2	
		Machine drawing 36	2	
		Engineering society 162	1	19

Fourth Year—First Semester.		Fourth Year—Second Semester.		
Power plant design 123	3	Cost accounting (Econ. 125)	2	
Engineering laboratory 132	2	Engineering laboratory 133	2	
Electrical engineering 53	4	Elements of elect. eng'g 54	4	
Business law 161	3			
Machine design 37	2	English (Eng. 14)	1	
Machine drawing 38	2	Designing and drawing 41	2	
Structural engineering 144	2	Engineering society 163	1	
Engineering society 163		18 Options from the list below	6	18
Steam engine design 39	2	Industrial engineering 47	3	
Gas engineering 126	3	Gas engine design 45	3	
Steam turbines 125	3	Heating and ventilation 127	3	
Steam engine drawing 40	2	Steam boilers 124	2	
Industrial education 206	3	Thesis 49 or 135	3	

ELECTRICAL ENGINEERING.

The course in electrical engineering is intended to give the student that theoretical and practical instruction which will enable him to obtain a basic knowledge of the application of electricity.

The work of the first two years is largely preparatory to the technical training of the latter two years, and parallels closely that of the mechanical engineering course. This gives the requisite foundation in English, mathematics, physics, chemistry, drafting and the elements of shop practice. Electrical construction is taken up at an early part of the course so that the student may profit by it when seeking summer employment. Some of the fundamental principles of electricity and magnetism are studied in the course in physics.

The purely electrical engineering courses begin with the third year. In the first semester of this year, the elements of electrical engineering together with illumination and signalling are studied. The theory is studied in the class room and then experimentally proved or verified in the laboratory. In the second semester this study is continued to include the design, construction and operation of direct current machinery as well as the theory of alternating currents. In addition to the electrical studies the following supplementary subjects come throughout the year: thermodynamics and heat engines; mechanics; mechanical laboratory practice; economics; and money, credit and banking.

The fourth year is largely devoted to a study of the commercial applications of electricity either directly or indirectly. The design, construction and operation of alternating current apparatus are studied in the class and the laboratory. The generation of electrical energy, its distribution and utilization, together with the economic factors to be considered are covered by the course in electrical generation and distribution, which is continued into the second semester as a design course. Previous to this second semester's work in general design, the fundamentals of design are covered in the courses in electrical design and calculations and machine design, both of which are given in the first semester. The course in electric traction takes up the proper selection of electric railway equipment and the course in advanced electrical laboratory is included to give the student an opportunity for original work. In the option the student has a choice of the following subjects: industrial applications of electricity; telephone engineering; transients, surges and electric waves; high tension dielectic phenomena; thesis; differential equations; and radio telegraphy. Other courses not already mentioned in the fourth year are: business law; engineering society; hydraulics; engineering laboratory; English; and cost accounting.

NOTE: See page 13, Special curricula for students with irregular preparation.

UNDERGRADUATE CURRICULUM IN ELECTRICAL ENGINEERING.

Leading to the Degree of Bachelor of Science in Electrical Engineering.

First Year—First Semester.		First Year—Second Semester		
Rhetoric and comp. (Eng. I)	3	Rhetoric and comp. (Eng. 2)	3	
Algebra and trigonometry (Math. 3 and 4)	5	Trigonometry and anylytical geometry (Math. 5 and 6)	5	
Inorganic chemistry(Chem. 1)	4	Surveying 101	1	
Military science (1)	1	Inorganic chemistry(Chem. 2)	4	
Mechanical drawing 20	2	Military science (2)	1	
Forging 7	1	Mechanical drawing 22	2	
Woodworking 1	1	17 Electrical Construction 610	2	18
Engineering lectures				

Summer work, Machine shop 13-3

Second Year—First Semester.		Second Year—Second Semester.		
Differential calculus (Math. 7)	3	Integral calculus (Math. 8)	3	
General physics (Phys. 6, 2)	5	General physics (Phys. 8, 4)	5	
Descriptive geometry 26	3	Statics 70	3	
Military science (3)	1	Mechanism 29	4	
Quantitative analysis (Chem. 4)	2	Military science (4)	1	
Mechanical drawing 24	2	Pattern making 4	2	18
Foundry 5	2	18		

Summer work (out of residence), Summer practice 164-2

Third Year—First Semester.		Third Year—Second Semester.		
Mechanics of materials 71	4	Kinetics 72	3	
Thermodynamics 121	3	Heat Engines 122	3	
Elements of electrical eng'g 50	4	Direct current machinery 52	4	
Hydraulics 73	2	A. C. Theory and meas. 55	3	
Mechanical laboratory 130	2	Mechanical laboratory 131	2	
Economics (Econ. 115)	3	Money, banking and credits		
Engineering society 162		18 . (Econ. 105)	2	
		Engineering society 162	1	18

Fourth Year—First Semester.		Fourth Year—Second Semester.		
A. C. machinery 56	3	Illumination and signalling 58	2	
Machine design 35	2	Electric traction 57	2	
Machine drawing 36	2	Elec. gen. and dist. 630	3	
Electrical laboratory 560	2	English (English 14)	1	
Elec. gen. and dist. 63	3	Engineering laboratory 133	2	
Elec. design and calcul. 590	3	Advance elect. laboratory 600	2	
Business law 161	3	Cost accounting (Econ. 125)	2	
Engineering society 163		18 Engineering society 163	1	
		Options from the list below	3	18
Indust. applications of elec. 65	3	Thesis 69	3	
Telephone engineering 68	3	Differential equations (Math. 9)	3	
Transients, surges and electric waves 62	3	Radio-telegraphy (Phys. 11)	3	
High tension dielectric phenomenon 67	3	Industrial education 206	3	

MINING ENGINEERING.

Mining engineering deals with the processes and appliances used in the extraction of minerals from within the earth. Not only must the mining engineer be thoroughly trained in mining and geology, but also in the application of the fundamental principles of civil, electrical and mechanical engineering to mining conditions.

The first two years of the course in mining engineering are devoted to a thorough training in the underlying principles of mathematics, physics and chemistry. Supplementing these are courses in surveying, including mine surveying, English, drawing, and shop work. For the last two years of the course two options are provided, one in coal mining and one in geological engineering and oil and gas production. The student is permitted to state his choice of option at the beginning of the sophomore year.

COAL MINING.

In the coal mining option the study of coal mining is taken up in the third year. This study includes the geology and classification of coals; explosives and blasting; prospecting; shaft sinking and tunneling; methods of working; haulage, hoisting and pumping; and the preparation of coal for the market. A course in the projection of mine workings and the design of mining plants runs throughout the senior year. A thorough course in mine gases and the ventilation of mines is given in the first half of the fourth year, supplemented by work in the mining laboratory. The course in fuels is designed to give the student a knowledge of the various fuels that are utilized in engineering practice, while the courses in metallurgy acquaint him with the materials and processes used in manufacture of iron and steel. The course in mine management presents the economic, social and financial considrations to be met in the successful management of a mining enterprise.

The study of steam engineering begins with the course in heat engineering, and practice in the handling and care of instruments and machinery and in the solution of practical engineering problems is offered in the mechanical laboratory. These courses are followed by courses in electrical engineering and structural engineering.

A training in the science of geology is afforded by the courses in mineralogy and general and historical geology. These courses may be supplemented by the study of the economic geology of the non-metallic minerals in the senior year, special attention being paid to the geology of coal, oil and gas. Should the student desire further work in geology a course in field geology is offered as an elective subject.

The courses in economics, money, banking and credits, business law and cost accounting furnish the fundamental business training so essential for the engineer.

NOTE: See page 13, Special curricula for students with irregular preparation.

UNDERGRADUATE CURRICULUM IN MINING ENGINEERING (COAL MINING OPTION)

Leading to the Degree of Bachelor of Science in Engineering of Mines.

First Year—First Semester.			First Year—Second Semester.		
Rhetoric and comp. (Eng. 1)	3		Rhetoric and comp. (Eng. 2)	3	
Algebra and trigonometry (Math 3 and 4)	5		Trigonometry and analytical geometry (Math. 5 and 6)	5	
Inorganic chemistry(Chem. 1)	4		Land surveying 100	3	
Military science (1)	1		Inorganic chemistry(Chem. 2)	4	
Mechanical drawing 20	2		Military science (2)	1	
Shop work 9	2	17	Mechanical drawing 22	2	18
Engineering lectures					

Second Year—First Semester.			Second Year—Second Semester.		
Differential calculus (Math. 7)	3		Integral calculus (Math. 8)	3	
General physics (Phys. 6, 2)	5		General physics (Phys. 8, 4)	5	
Descriptive geometry 26	3		Statics 70	3	
Advanced surveying 102	2		Mine surveying 80	2	
Military science (3)	1		Military science (4)	1	
Mineralogy 89	1		Quan. analysis (Chem. 6)	4	18
Pipe fitting 10	1				
Mechanical drawing 25	2	18			

Summer work, Mine surveying 90—3

Third Year—First Semester.			Third Year—Second Semester.		
Heat engineering 120	3		Kinetics 72	3	
Mechanical laboratory 130	2		Mechanical laboratory 131	2	
Mechanics of materials 71	4		Hydraulics 73	2	
Coal mining 81	2		Coal mining 82	4	
Geology (Geol. 2 and 21)	4		Mining Methods 88	4	
Economics (Econ. 115)	3		Money, banking and credits		
Engineering society 162		18	(Econ. 105)	2	
			Engineering society 162	1	18

Summer work (out of residence), Summer practice 164—2

Fourth Year—First Semester.			Fourth Year—Second Semester.		
Mine ventilation 83	3		English (Eng. 14)	1	
Mining design 86	2		Mining design 87	3	
Structural engineering 144	3		Mine management 84	1	
Electrical eng'g 53	4		Electrical eng'g 54	4	
Metallurgy 171	2		Mining laboratory 95	3	
Metallurgical lab. 96	1		Cost accounting (Econ. 125)	2	
Business law 161	3		Engineering society 163	1	
Engineering society 163		18	Options from the list below	3	18
Thesis 99	3		Economic geology (Geol. 4)	3	
Concrete construction 147	3		Fuels 178	3	
Field geology 17	3		Industrial education 206	3	

GEOLOGICAL ENGINEERING AND OIL AND GAS PRODUCTION

This option is planned to meet the needs of the engineer who is more interested in the geological aspect of mining than in the actual operation of a mining property. There is a growing demand for the so-called mining geologist who, while he has a thorough training in the fundamentals of engineering in general and of mining engineering in particular, yet is specially qualified to work out the detailed geological features of mining properties and to make reports on them. This is peculiarly true in the case of oil and gas companies, where accurate geological knowledge in advance of actual drilling operations is of the greatest importance in the economical development of the field. Beside the opportunities offered by mining companies many of our railroads maintain corps of geologists while the several states and the federal government are continually carrying on geological investigations. This course also offers an excellent preparation for those who propose to carry on graduate work. Sufficient latitude in the selection of electives will be permitted to allow the course to conform to the needs of the individual student.

In the junior year the course differs from the coal mining option in that organic chemistry and geological courses are substituted for the courses in coal mining. A course in field geology in which the student prepares a geological map and a complete report on an assigned area enables him to apply the geological knowledge he received in his sophomore year. The fundamentals of mining are studied in the senior year as well. The study of oil and gas geology treats of the origin, properties, distribution and mode of accumulation of oil and gas, and familiarizes the student with all the available sources of information on this subject. The courses in oil and gas production and oil refining take up the subjects of the chemical and physical properties of petroleum and natural gas, their extraction and subsequent treatment, the valuation of oil and gas properties, reports on them, and the actual testing in laboratory of various oils, oil shales, and natural gas.

A thorough grounding in the fundamentals of business is afforded by the courses in economics, money, banking and credits, business law and cost accounting.

NOTE: See page 13, Special curricula for students with irregular preparation.

UNDERGRADUATE CURRICULUM IN MINING ENGINEERING (OIL AND GAS OPTION)

Leading to the Degree of Bachelor of Science in Engineering of Mines.

First Year—First Semester.			First Year—Second Semester		
Rhetoric and comp. (Eng. 1)	3		Rhetoric and comp. (Eng. 2)	3	
Algebra and trigonometry (Math. 3 and 4)	5		Trigonometry and analytical geometry (Math 5 and 6)	5	
Inorganic chemistry(Chem. 1)	4		Land surveying 100	3	
Mechanical drawing 20	2		Inorganic chemistry(Chem. 2)	4	
Military science (1)	1		Military science (2)	1	
Shop work 9	2	17	Mechanical drawing 22	2	18
Engineering lectures					

Second Year—First Semester.			Second Year—Second Semester		
Differential calculus (Math. 7)	3		Integral calculus (Math. 8)	3	
General physics (Phys. 6, 2)	5		General physics (Phys. 8, 4)	5	
General geology (Geol. 2, 21)	3		Historical geology (3, 31)	4	
Mineralogy 89	1		Quan. analysis (Chem. 6)	5	
Descriptive geometry 26	3		Military science (4)	1	18
Mechanical drawing 25	2				
Military science (3)	1	18			

Third Year—First Semester.			Third Year—Second Semester.		
Mechanics 76	5		Mechanics 77	5	
Advanced surveying 102	2		Hydraulics 73	2	
Organic chemistry (Chem. 9)	5		Mine surveying 80	2	
Metallurgy 171	2		Economic geology (Geol. 4)	3	
Pipe-fitting 10	1		Field geology (Geol. 17)	3	
Economics (Econ. 115)	3		Money, banking and credits (Econ. 105)	2	
Engineering society 162		18	Engineering society 162	1	18

Summer work (out of residence), Summer practice 164—2

Summer work; Mine surveying 90—3

Fourth Year—First Semester			Fourth Year—Second Semester.		
Heat engineering 120	3		Mechanical laboratory 131	2	
Mechanical laboratory 130	2		English (Eng. 14)	1	
Oil and gas geology (Geol. 13)	3		Oil and gas production 92	2	
Coal mining 81	2		Geological Surveying 98	2	
Applied electricity 51	4		Fuels 178	3	
Metallurgical laboratory 96	1		Oil refining 186	2	
Business law 161	3		Cost accounting (Econ. 125)	2	
Engineering society 163		18	Engineering society 163	1	
Economics geology (Geol. 5)	3		Options from the list below	3	18
Concrete construction 147	3		Thesis 99	3	
Coal mining 82	4		Industrial education 206	3	

CHEMICAL ENGINEERING.

The object of the four-year course in chemical engineering is to qualify young men to design, build, and manage manufacturing plants in which the products of manufacture are based on chemical processes and to fit men for professional employment as industrial chemists and chemical engineers.

The curriculum outlined on the following page is designed to give the student a thorough knowledge of the fundamental principles of chemistry, a theoretical and practical training in mechanical engineering subjects including electrical engineering, and a thorough training in industrial chemistry and the more common engineering and industrial processes based on chemical reactions.

The course includes theoretical and analytical work in inorganic, organic and industrial chemistry, mathematics, physics, theoretical and applied mechanics, mechanical drawing, shop practice, structural engineering and industrial management, heat engineering, plant design, electrical engineering, mechanical and electrical laboratory, mineralogy and metallurgy and work in the strictly chemical engineering subjects. The options in the senior year are in three groups; chemical engineering, geology and mining, and engineering administration. Thesis subjects will usually be selected from problems related to the development of the natural resources of West Virginia as foundations for chemical industries.

Students preparing to take the course in chemical engineering should present German for entrance. In order to provide time for a broader training in language, economics, history and science, and for additional courses in applied chemistry and engineering, students are recommended to take the combination Bachelor of Science and Engineering course. By a careful selection of electives both degrees may be secured in five years.

NOTE: See page 13, Special curricula for students with irregular preparation.

UNDERGRADUATE CURRICULUM IN CHEMICAL ENGINEERING.

Leading to the Degree of Bachelor of Science in Chemical Engineering.

First Year—First Semester.		First Year—Second Semester.	
Rhetoric and comp. (Eng. 1)	3	Rhetoric and comp. (Eng. 2)	3
Algebra and trig. (Math. 3 and 4)	5	Trigonometry and analytical geometry (Math 5 and 6)	5
Inorganic chemistry (Chem. 1)	4	Surveying 101	1
Military science (1)	1	Inorganic chemistry (Chem. 2)	4
Mechanical drawing 20	2	Military science (2)	1
Woodworking 1	1	Mechanical drawing 22	2
Forging 7	1	17 Foundry 5	2 18
Engineering lectures			

Summer work; Machine Shop 11—2 and Pipe-fitting 10—1

Second Year—First Semester.		Second Year—Second Semester.	
Differential calculus (Math. 7)	3	Integral Calculus (Math. 8)	3
General physics (Phys. 6, 2)	5	General physics (Phys. 8, 4)	5
Descriptive geometry 26	3	Mechanism 29	4
Military science (3)	1	Military science (4)	1
Qual. analysis (Chem. 5)	4	Quant. analysis (Chem. 6)	5 18
Mechanical drawing 24	2 18		

Summer work, Summer practice 164—2

Third Year—First Semester.		Third Year—Second Semester.	
Mechanics 76	5	Mechanics 77	5
Thermodynamics 121	3	Machine design 35	2
Mechanical laboratory 130	2	Machine drawing 36	2
Organic chemistry (Chem. 9)	5	Mechanical laboratory 131	2
Elect. and mag. (Physics 10)	3	Physical chem. (Chem. 21)	5
Engineering society 162	18	Mineralogy 89	1
		Engineering society 162	1 18

Fourth Year—First Semester.		Fourth Year—Second Semester.	
Chem. Eng'g and Mfg. 181 and 182	4	Chem. Eng'g & Mfg. 183 and 184	4
Electrical engineering 53	4	Electrical Eng'g 54	4
Fuels 178 or Quant. Anal. (Chem. 7)	3	English (English 14)	1
Coal laboratory 96	1	Industrial management 46	1
Metallurgy 171 and 172	3	Hydraulics 73	2
Economics (Econ. 115)	3	Engineering society 163	1
Engineering society 163	18	Options from list below	5 18
Chemical engineering courses 173, 174, 180, 185, 186, 190, 192, 193, (196)	2 to 5	Power plant design 123	3
Geology (Geology 2)	3	Highway laboratory 136	
Industrial applications of electricity 65	3	Business law 161	3
		Money, credit and banking (Econ. 105)	2
		Cost accounting (Econ. 125)	2
		Industrial education 206	3

UNDERGRADUATE CURRICULUM IN INDUSTRIAL EDUCATION.

Leading to the Degree of Bachelor of Science in Industrial Education.

The object of this course is to prepare men and women to teach related and non-vocational industrial subjects in high schools, vocational schools, night schools, part-time schools, and schools in industrial plants and to supervise work in connection with the administration of the Smith-Hughes Act. It is intended to give prospective students a broad, flexible, practical education with required specialization along at least two lines, designed below as major and minor groups.

The major group will be from any branch of engineering offered in the College of Engineering as mining, mechanical, civil, chemical, electrical.

The minor group shall be from a second branch of engineering. No work offered as satisfying the conditions of the major group will be accepted as satisfying the minor group or vice versa.

In addition to the shop work taken in the University, there shall be not less than 18 weeks of work done during the summer vacations, along the lines of the major and minor groups, upon which there shall be a weekly report. This work will carry a credit of five hours.

Those who have had a satisfactory trade experience of two years beyond the period of apprenticeship in accordance with the requirements of the state plan for vocational education and who take this course will be eligible to teach their trade as well.

The course of any candidate for a degree must include:

Educational subjects	20 hrs.	Mathematics	16 hrs.
English	10	Shop and Summer work	20
Drawing	6	Major group	22
Chemistry	10	Minor group	12
Physics	10	Elective	18-22
Military science (when required)	4		

At the beginning of the junior year, the student must submit to the Faculty of the College of Engineering, through his class officer, his proposed course of study for his junior and senior years for their approval.

UNDERGRADUATE CURRICULUM IN INDUSTRIAL EDUCATION

Leading to the Degree of Bachelor of Science in Industrial Education.

First Year.

First Semester.			Second Semester.		
English 1	3		English 2	3	
Mathematics 3 and 4	5		Mathematics 5 and 6	5	
Chemistry 1	4		Chemistry 2	4	
Military science 1	1		Military science 2	1	
Drawing 20	2		Drawing 22	2	
Education 17	3	18	Shop work	3	18

Second Year.

First Semester.			Second Semester.		
Mathematics 7	3		Mathematics 8	3	
Physics 6, 2	5		Physics 8, 4	5	
Drawing 24, 25	2		Shop work	3	
Education 12	3		Education 10	3	
Military science 3	1		Military science 4	1	
Chemistry 4	2		Elective	3	18
Shop work	2	18			

Third and fourth years to be arranged. See preceding page for requirements.

COMBINED SCIENCE AND ENGINEERING CURRICULUM.

The following course of study is suggested for students who expect to take an engineering degree after receiving the degree of Bachelor of Science, or who wish to take a general course with engineering subjects as a major:

English composition (English 1 and 2)	6	hrs.
English literature (English 26 and 27)	4	"
Algebra and trigonometry	7	"
Analytical geometry and calculus	9	"
Physics 6, 2, 8, 4	10	"
Mechanics 70, 71, 72	10	"
Chemistry 1, 2 and 4	10	"
Descriptive geometry	3	"
Mechanical drawing	6	"
One foreign language	20	"
Botany, zoology, geology, or entomology, any one	8	"
History, economics, or commerce, any one	8	"
Military science (when required)	4	"
Electives, preferably in science and engineering, that count toward both the bachelor of arts and engineering degrees	23	"
Total	128	"

Students who expect to take a degree in civil engineering should include Geology 2 and 4, Land surveying 100, Mechanical drawing 25, Hydraulics 73, Applied electricity 51 and Shop work 9.

Applicants for a degree in mechanical or electrical engineering should include ten hours in shop work, Mechanical drawing 24 and 28, Mechanism 27, Surveying 100 and Physics 10.

Applicants for a degree in mining engineering should include Geology 2 and 4, Chemistry 6, Land surveying 100, Physics 10, Mineralogy 98, Shop work 9 and Mechanical drawing 24.

The requirements of the economics and history group may be met by taking Economic 115, 105 and 125 and Business Law 161.

Students who wish to prepare for teaching science, engineering or industrial subjects, may with the approval of the Committee on Classification and Grades substitute eight hours in education for an equivalent amount of required work in the science and history groups.

By following the above curriculum students may receive both the B.S. degree and the engineering degree in five years.

SPECIAL ENGINEERING CURRICULA.

1. Elective Groups for Students in Other Colleges. Candidates for degrees other than engineering degrees, and special students in any department of the University, are permitted to elect subjects in the College of Engineering, provided, in each case, they have had the subjects specified as prerequisites. Students who wish to take a general classical or scientific course of study before taking the engineering curriculum are advised to carry their mathematics as far as called for by the engineering curriculum, and to take some of their elective work in the College of Engineering. The engineering instructors will advise them what is best to elect.

Credits are given in the College of Arts and Sciences for the following engineering courses:

Subject.	Credit Hours.
Mechanical drawing 20-25, 28 or 30	8
Descriptive geometry 26	3
Industrial management 46, 47	4
Elements of electrical engineering 50	4
Applied electricity 51	3
Elements of electrical engineering 53, 54	8
Direct current machinery 52	4
Theory of alternating currents 55	3
Alternating current machinery 56	3
Electrical laboratory 560, 600	4
Applied electricity in home and office 66	2
Statics 70	3
Mechanics of materials 71	4
Hydraulics 73	2
Dynamics 72	3
Metallurgy 171, 172	3
Land surveying 100 and 101	3
Thermodynamics 121	3
Heating and ventilating 127	3
Heat engines 122	3
Geological surveying 98	2

In addition to the above the student may elect with the consent of his class officer, when his major subject is physics or education:

Engineering 1-18 (Mechanic arts)	10
Mechanical drawing 20-25, 28 or 30	3

2. Partial Curriculum. Students who have not the time or are otherwise unable to take a full curriculum, will be allowed to take a special or partial curriculum, consisting of such studies as they are prepared to take, provided that such curriculum shall have been approved by the class officer. For further information see statement of requirements for admission as special students.

SUMMER TERM.

A summer term lasting six weeks is given immediately after the close of each collegiate year. The following regular engineering courses will be offered at that time: Woodworking 1, 2, 3; Forging 7 and 8; Pipe fitting 10; Machine tool work 13 and 14; Machine construction 15; Mechanical drawing 20, 22, and Surveying 109; Railroad surveying 110 and Mine surveying 90.

Surveying 109 is given during the first week (eight hours per day for six working days) and Railroad surveying continues for two weeks. Mine surveying 90 will follow Surveying 109 for two full weeks. Machine shop 13 may be completed by full time work covering the first three weeks or may be distributed over the full term of six weeks. Hours 8:00 to 12:00, 1:00 to 5:00 every week day except Saturday afternoon. Special hours for students taking less than full work will be arranged.

Students in mechanical and electrical engineering should take Machine tool work 13, three hours in the summer term following the freshman year.

This work, with that taken during the preceding freshman and the following sophomore collegiate years will enable students to fill positions in shops, factories, etc., during the two other vacations with better financial advantage and with far better results in the way of practical engineering experience than if the summer work is postponed until the second vacation. Students not taking the summer shop work in the first summer term will take Machine tool work 13 (2 hrs.) during the sophomore year and will then take the remaining two hours of Machine tool work 12 and 14 and pipe fitting 10 during the second summer term.

Students in civil and mining engineering should take the residence courses in surveying at the time scheduled, but Summer Practice 164 may be taken out of residence during any vacation period.

Students who are regular in their work are urged to spend all their vacation periods in practical work, but students who are irregular or have conditions should so far as possible take advantage of the summer school to make up their deficiencies.

In cases where students have exceptional opportunities in the way of practical summer work in commercial machine shops and engineering corps, along the line covered by the University courses, credit will be given for such work, the amount to be determined after an examination of each individual case.

CURRICULA FOR GRADUATE STUDENTS IN ENGINEERING.

Graduate courses lead to the professional degrees of Master of Science in Civil Engineering, Master of Science in Mechanical Engineering, Master of Science in Electrical Engineering, Master of Science in Engineering of Mines, and Master of Science in Chemical Engineering, respectively. They consist of advanced engineering courses aggregating twenty-four semester hours and a thesis, and require one year of resident study and work at the University.

A candidate for a professional degree is required to have completed the prescribed four-year curriculum of undergraduate study in that department of the college in which he proposes to take a degree, or to have completed such a curriculum or its equivalent at some other institution of recognized standing, conferring the same or an equivalent baccalaureate degree. In the latter case, the diploma and other certificates of proficiency should be presented.

There is no fixed curriculum of subjects for any of these degrees, but the curriculum of study or investigation is arranged to suit the needs of each candidate, subject to the University regulations governing candidates for the master's degree. (See Catalogue). Each candidate for a degree must select his major subject in the department in which his degree is to be taken and submit a thesis showing attainment in some phase of this subject.

PROFESSIONAL DEGREES FOR WORK IN ABSENTIA.

The University confers the following professional degrees: Civil Engineer (C.E.), Mechanical Engineer (M.E.), Electrical Engineer (E.E.), and Engineer of Mines (E.M.), upon graduates of the College of Engineering of the West Virginia University on the basis of practical experience and study in absentia, the presentation of a thesis and an oral final examination.

To be eligible a candidate for a professional degree must have been in active practice of his profession for at least five years since receiving his first degree and must have been in responsible charge of important work for at least two years, and must be qualified to design as well as direct engineering work.

Application for registration as a candidate for a degree should be made not later than the first day of October in the year in which the degree is expected. Detailed regulations and registration blanks may be obtained from the Dean of the College of Engineering.

COURSES OF INSTRUCTION.

In the following announcements ,the name of the course is followed by its credit value in semester hours. A credit of one semester hour is given for a lecture or recitation course meeting one hour per week for one semester and requiring two hours of preparation for each lecture or recitation.

Credit for practical work in the shops, drawing rooms, laboratories and field, is given on the basis of the actual time required, including the preparation of reports and the writing of notes, three hours actual work counting as one recitation hour.

Courses starred (*) may be taken as undergraduate work by students in colleges other than the College of Engineering.

Courses marked (G) are primarily for graduate students. Those marked (†) are open to graduates.

DRAWING, MACHINE DESIGN AND CONSTRUCTION.

Professors HAYES and GILL, Assistant Professors GROW and WHITE and Messrs. WEST, SEAMAN, CATHER, CARL, BROOKS, STILLMAN, GNAGEY and KNIGHT.

1. **Woodworking.** (1 Hr.) Instruction in carpentry; exercises with the fundamental edge tools in soft and hard woods and in making typical framed work; wood turning; face plate work; boring, finishing, and polishing.

Both semesters; two three hour periods weekly, one-half semester only: Messrs. SEAMAN and STILLMAN. (Also given in Summer Term.)

3. **Woodworking.** (3 Hrs.) Advanced work for vocational students and special students, who are allowed to specialize along the lines of their choice. Prerequisite: Woodworking 1.

Second semester; hours to be arranged; Mr. SEAMAN. (Also given in Summer Term.)

4. **Pattern Making.** (2 Hrs.) The production of patterns for castings for machine construction and other work to be executed later in machine shop. Prerequisite: Woodworking 1, and Foundry 5.

Both semesters; two three hour periods weekly; Messrs. SEAMAN and STILLMAN.

5. **Foundry Work.** (2 Hrs.) Floor, bench and machine molding; sweep and loam work; follow-board and match-plate; core room work; mixing of iron, brass and alumnium for melting.

Both semesters; two three hour periods weekly; Messrs. SEAMAN and CARL.

6. **Foundry Work.** Advanced work for special students. Continuation of Foundry 5.

Semester and hours to be arranged; Messrs. SEAMAN and CARL.

7. **Forging.** (1 Hr.) Instruction in the care of forges; forming and welding of iron and steel; and hardening, tempering and annealing of steel.

Both semesters; two three hour periods weekly, one-half semester only; Mr. WEST.

8. **Forging.** Advanced work for special students. Continuation of Forging 7.

Hours to be arranged; Mr. WEST.

9. **Shop Work.** (2 Hrs.) Instruction in woodworking, forging, and machine shop practice.

First semester; two three hour periods weekly; Messrs. WEST, SEAMAN and GNAGEY.

10. **Pipe Fitting.** (1 Hr.) Required of all candidates for degrees in mechanical and mining engineering.

Both semesters; two three hour periods weekly, one-half semester only; Mr. WEST.

11. **Machine Tool Work.** (2 Hrs.) Hand work and elementary machine work. Lectures and shop practice.

Both semesters; two three hour periods weekly; Professor GILL and Mr. GNAGEY.

12. **Machine Tool Work.** (1 Hr.) A continuation of Machine Tool Work 11, which is a prerequisite. Lectures and shop practice.

Both semesters; two three hour periods weekly, one-half semester; Professor GILL and Mr. GNAGEY.

13. **Machine Tool Work.** (3 Hrs.) Hand work and elements of machine work. Lectures and shop work. Equivalent to courses 11 and 12.

Summer term, eight hours per day for three weeks or four hours per day for six weeks; Professor GILL and Mr. GNAGEY.

14. **Machine Tool Work.** (1 Hr.) A continuation of Machine Tool Work 11 and 12 or Machine Tool Work 13 which is a prerequisite. Advanced work on lathe, planer, milling machine, grinder and special machines.

Both semesters; two three hour periods weekly for one-half semester; Professor GILL and Mr. GNAGEY.

15. **Machine Construction.** (2 Hrs.) Continuation of Machine tool work 14 with special attention to assembling, fitting and erecting of machines. Study of principles of heat treatment. Lectures and shop work.

First semester; two three hour periods weekly; Professor GILL, and Mr. GNAGEY.

16. **Shop Methods.** (2 Hrs.) A continuation of Machine construction 15. A study of manufacturing methods for limited and quantity production; building and use of jigs, fixtures, templates, gages, tooling and operation of automatic machine tools, turret lathes and production machines. Shop laboratory work, lectures, inspection trips, special investigations.

Second semester; two three hour periods weekly; Professor GILL and Mr. GNAGEY.

17. **Machine Construction.** Advanced work for special students. Continuation of Machine construction 15 and Shop methods 16.

Hours to be arranged; Professor GILL.

20.* **Mechanical Drawing.** (2 Hrs.) Care and use of drawing instruments, plain lettering, including proficiency in at least one style, orthographic projection, isometric projection.

First semester; two three hour periods weekly; Assistant Professor GROW, and Messrs. CATHER, BROOKS, and KNIGHT.

22.* **Mechanical Drawing.** (2 Hrs.) Continuation of Mechanical Drawing 20. Tracing, engineering sketches and working drawings from models, and drawing machine parts from proportions obtained from empirical formulas.

Second semester; two three hour periods weekly; Assistant Professors GROW and WHITE and Messrs. CATHER and BROOOKS.

23.* **Mechanical Drawing.** (2 Hrs.) Elective for students in agriculture. Use of drawing instruments, practice in reading of drawings, building plans, designing and drawing of framed structures and their details.

Second semester; Assistant Professor GROW.

24.* **Empirical Design.** (2 Hrs.) Continuation of Mechanical Drawing 22. Detail and assembly drawings from proportions obtained from empirical formulas. Also a study of the purpose, characteristics, and stock sizes of various standardized machine parts.

First semester; two three hour periods weekly; Assistant Professor GROW and Messrs. CATHER and BROOKS.

25.* **Mechanical Drawing.** (2 Hrs.) Continuation of Mechanical Drawing 22. Drawing room conventions for representation of materials, details of topography, wooden framing, structural steel shapes and framing, etc., lettering of titles, map tracing.

First semester; two three hour periods weekly; Assistant Professor GROW and Messrs. CATHER and BROOKS.

26.* **Descriptive Geometry.** (3 Hrs.) Orthographic projection in the four quadrants; problems of the point; line and plane; tangen-

cies; intersection of plane and curved surfaces; developments of single curved surfaces. Prerequisite: Mechanical Drawing 20, and Solid Geometry.

First semester; three periods weekly; Professor MORRIS, Assistant Professor GROW, and Mr. CATHER.

29. **Mechanism.** (4 Hrs.) Analysis and classification of mechanisms; diagrams of relative velocities of machine parts; transmission and change of motions. Drawing and diagrams of mechanical movements, velocity diagrams, graphical solution of problems, design and drawing of gear teeth. Lectures, recitations and drawing problems. Prerequisites: Mechanical Drawing 22 and Descriptive Geometry 26.

Second semester; two one hour and two three hour periods weekly; Assistant Professors GROW and WHITE and Mr. CATHER.

35. **Machine Design.** (2 Hrs.) To accompany Machine Drawing 36. Elements of machine design, conventional and rational proportioning of parts; mechanics of machinery; influence of material and treatment on design. Prerequisites: Mechanics 71 and Mechanism and Machinery 27, and Mechanism Drawing 28.

Either semester; two periods weekly; Professor HAYES.

36. **Machine Drawing.** (2 Hrs.) To accompany Machine Design 35. Designing and drawing of machine elements and finally of complete machine.

Either semester; two three hour periods weekly; Professor HAYES and Mr. WHITE.

37. **Advanced Machine Design.** (2 Hrs.) Continuation of Machine Design 35. To accompany Designing and Drawing 38. Graphical solutions of problems in machine forces; theory of elasticity; dynamics of machines, governors, reciprocating parts, fly-wheels, running balance, whirling of shafts, etc. Lectures and recitations.

First semester; two periods weekly; Professor HAYES.

38. **Designing and Drawing.** (2 Hrs.) To accompany Advanced Machine Design 37.

First semester; two three hour periods weekly; Professor HAYES and Mr. WHITE.

39. **Steam Engine Design.** (2 Hrs.) To accompany Designing and Drawing 40. Detailed study of modern steam engine; comparison of rational and empirical formulae. Dynamics of machines; governors, valve gears, reciprocating parts and fly-wheels. Lectures and recitations. Prerequisites: Machine Design 35 and 37; and Machine Drawing 36 and 38.

Second semester; two periods weekly; Professor HAYES.

40. **Designing and Drawing.** (2 Hrs.) To accompany Steam Engine Design 39.

Second semester; two three hour periods weekly; Professor HAYES.

41. **Designing and Drawing.** (2 Hrs.) Continuation in the drawing room of Power-plant Design 123. Making of the working drawings showing the location of boilers, engines, auxiliaries, piping, coal and ash handling machinery, etc.

Second semester; two three-hour periods weekly; Professor HAYES.

44. **Metallurgy.** (3 Hrs.) Elements of metallurgy of iron-carbon and other ferrous alloys. Study of equilibrium diagram and transformation points with applications to heat treatment of steels used in engineering. Lectures, recitation and laboratory work.

Second semester; hours to be arranged; Professor HAYES; 209 M. H.

45. **Gas Engine Design.** (3 Hrs.) Prerequisite: Machine Design 35.

Second semester; hours to be arranged; Professor HAYES.

46.* **Industrial Management.** (1 Hr.) Elementary study of organization of industrial establishments, management, systems of payment, cost keeping, distribution of overhead expenses, determination of cost of production, etc.

Second semester; one period weekly; Professor HAYES.

47.* **Industrial Engineering.** (3 Hrs.) Study of the underlying principles governing the establishment, equipment and operation of the various types of industrial plants.

Second semester; three periods weekly; Professor HAYES.

49. **Thesis.** (3 Hrs.) The working out of some special problems in design or construction or both. See general thesis requirements, page 15.

Hours to be arranged; Professor HAYES.

ELECTRICAL ENGINEERING.

Professor FORMAN, Associate Professor HALL and Mr. WALLS.

50.* **Elements of Electrical Engineering with Laboratory.** (4 Hrs.) Primarily for third year students in electrical engineering. Electric and magnetic units, electric and magnetic circuits and direct current measuring apparatus, with one laboratory period a week. Prerequisite: Physics 3.

First semester; Professor FORMAN and Mr. WALLS.

51.* **Applied Electricity.** (4 Hrs.) Primarily for third year students in civil engineering. A brief course covering the principles and most important industrial applications of electricity. One laboratory period a week. Prerequisite: Physics 3.

Second semester; Professor FORMAN.

52.* **Direct Current Machinery.** (4 Hrs.) To follow Engineering 50. Principles underlying design, construction and operation of direct current machinery. One laboratory period a week.

Second semester; Associate Professor HALL.

53.* **Elements of Electrical Engineering.** (4 Hrs.) A course for fourth year students in mechanical, mining and chemical engineering. A general study of the generation, transmission and utilization of electrical energy, and the characteristics of electrical machines. Accompanied by Electrical Laboratory. Prerequisite: Physics 10.

First semester; Associate Professor HALL and Mr. WALLS.

54.* **Elements of Electrical Engineering.** (4 Hrs.) A continuation of Engineering 53.

Second semester; Professor FORMAN and Mr. WALLS.

55.* **Alternating Current Theory and Measurements.** (3 Hrs.) A study of periodic currents and the application of vector analysis to circuits containing these currents. Alternating current measuring instruments and the measurements of single and polyphase power. One laboratory period bi-weekly. Prerequisite: Engineering 50.

Second semester; Professor FORMAN.

56.* **Alternating Current Machinery.** (3 Hrs.) Continuation of Engineering 55. Principles of design, construction and operation of single and polyphase machinery. Accompanied by Electrical Engineering Laboratory 560.

First semester; Professor FORMAN.

560.* **Electrical Engineering Laboratory.** (2 Hrs.) Experimental study of the characteristics of single and polyphase machines, inductance and capacity and their effects in a circuit. Efficiency and

regulation tests of alternating current apparatus. To accompany Engineering 56.

First semester; Professor FORMAN and Mr. WALLS.

57. **Electric Traction.** (2 Hrs.) A study of the equipment of electric railway installations with special treatment of transmission and signal systems for traction. Prerequisite: Engineering 56.

Second semester; Associate Professor HALL.

58. **Illumination and Signalling.** (2 Hrs.) Principles and practice of illumination. Elements of electrical transmission of intelligenece over electric circuits. Prerequisite: Physics 3.

First semester; Professor FORMAN.

590. **Electrical Design and Calculations.** (3 Hrs.) This course requires nine hours a week in the designing room and consists of problems especially selected to make the student proficient in design and calculations utilizing the laws of electric and magnetic circuits.

First semester; Associate Professor HALL.

600. **Advanced Electrical Laboratory.** (2 Hrs.) Laboratory investigation and experimental study of special problems intended to give the student practice in individual research work.

Second semester; Professor FORMAN and Mr. WALLS.

610. **Electric Construction.** (2 Hrs.) Special construction work assigned to student according to previous experience. Assignments for reports, will be made by the instructor to engineering literature and to electrical equipment outside the University laboratories.

Lectures by men engaged in commercial work, as well as by instructors in the University will be arranged for.

Both semesters; Associate Professor HALL and Mr. WALLS.

63. **Electric Generation and Distribution.** (3 Hrs.) Analysis of factors to be considered in the selection of electrical generating and transmitting apparatus. Study of present and future market demands for power, load curves and factors governing the economics of substation, transmission and distribution of electrical energy. Study of rates, service and obligation to public, right of way, various types of generation units, switching apparatus and transmission lines. Prerequisite: Engineering 54.

First semester; Associate Professor HALL.

630. **Electric Generation and Distribution.** (3 Hrs.) To follow Engineering 63. The design and layout in the designing room of generating, switching, sub-station equipment and transmission lines.

Second semester; Associate Professor HALL.

640. (G) **Electrical Research.** For graduate students only. Laboratory investigations in special lines of electrical studies.

Hours and credits to be arranged; Professor FORMAN.

65.† **Industrial Applications of Electricity.** (3 Hrs.) The use of electricity in the various industries; motor drive, the electric furnace, electric welding, electric refining of metal, etc.

Factors governing the selection of the types and sizes of motors with their control. Reports upon subjects of special interest to individual students.

Second semester; Associate Professor HALL.

66.* **Applied Electricity in Home and Office.** (2 Hrs.) Primarily for students taking degrees not requiring higher mathematics. Meaning of common electrical terms; study of various methods of charging for electrical energy; advantages to be derived in the economical use of electricity.

Second semester; Associate Professor HALL.

67.† **High Tension Dielectric Phenomena.** (3 Hrs.) Study of the electrostatic field as influenced by conductors and dielectrics; the dielectric circuit for gaseous, liquid, and solid dielectrics; corona; theory and design of high voltage insulators. Prerequisite: Engineering 55.

Second semester; Professor FORMAN.

68.† **Telephone Engineering.** (3 Hrs.) Study of the various commercial systems of telephony, the installation, maintenance, testing and operation of telephone systems. Long distance and radio telegraphy. One laboratory period a week. Prerequisite: Engineering 55.

Second semester; Mr. WALLS.

69.† **Thesis.** (3 Hrs.) Special investigation or original research on some topic relating to electrical engineering.

Professor FORMAN and Associate Professor HALL.

62.† **Transients, Surges and Electric Waves.** (3 Hrs.) The study of transient phenomena such as occur in transmission lines and high tension generating and transforming apparatus. Theory of electromagnetic wave transmission over electric circuits and its application to aerial, subterranean and submarine signalling.

Second semester; Professor FORMAN.

MECHANICS.

Professor BOOMSLITER and Mr. KERSLAKE.

70.* **Statics.** (3 Hrs.) A study of the composition and resolution of forces, by analytical and graphical methods; moments, couples, equilibrium, center of gravity; stresses in frames and jointed structures. Prerequisite: Integral calculus.

Second semester; Professor BOOMSLITER and Mr. KERSLAKE.

72.* **Kinetics.** (4 Hrs.) Continuation of Statics 70. Laws of motion, centrifugal force; work, energy, impulse and momentum; revolving masses, motions of rigid bodies. Introduction to mechanics of materials. Prerequisite: Statics 70.

First semester; Professor BOOMSLITER and Mr. KERSLAKE.

71.* **Mechanics of Materials.** (3 Hrs.) Continuation of Courses 70 and 72. The strength and stiffness of the common materials of construction and structural elements; riveted joints; cantilever, simple, fixed and continuous beams; columns; the design of simple structures. Prerequisite: Statics 70.

Second semester; Professor BOOMSLITER and Mr. KERSLAKE.

73.* **Hydraulics.** (2 Hrs.) Theoretical pressure and energy of water; flow of water through orifices and tubes and over weirs; flow in conduit, pipes, canals, and rivers; current meters, water motor turbines. Prerequisite: Kinetics 72.

Second semester; Professor DAVIS.

76. **Mechanics.** (5 Hrs.) Includes Statics 70, and first half of Mechanics of materials 71.

First semester; Professor BOOMSLITER and Mr. KERSLAKE.

77. **Mechanics.** (5 Hrs.) Continuation of Course 76. Includes last half of Mechanics of materials 71 and Kinetics 72.

Second semester; Professor BOOMSLITER and Mr. KERSLAKE.

NOTE: Mechanics 76 and 77 are intended for students who have taken Mathematics 13 and 14 in the sophomore year.

MINING ENGINEERING.

Professor Callen and Mr. Lawall.

80. **Mine Surveying.** (2 Hrs.) Methods of mine surveying and systems of note keeping; location of outcrop; shaft plumbing; field astronomy; elements of railroad surveying. Prerequisite: Advanced Surveying 102.

Second semester; Mr. Lawall.

81. **Coal Mining.** (2 Hrs.) Occurence, composition and classification of coal; explosives; shaft sinking; timbering; coal cutting and loading machines. Prerequisite: Chemistry 6, Physics 8.

First semester; Mr. Lawall.

82. **Coal Mining.** (4 Hrs.) A study of the various systems of haulage, hoisting and pumping; surface plants; the preparation of coal for the market. Prerequisite: Coal Mining 81.

Second semester; Professor Callen.

83. **Mine Ventilation.** (3 Hrs.) Mine air and mine gases; the ventilation of mines; mine lighting; a study of the causes and prevention of mine explosions; rescue and recovery work. Prerequisite: Coal Mining 81 and 82.

First semester; Professor Callen.

84. **Mine Management.** (1 Hr.) Mine economics, organization and care of labor, mine accounting and cost keeping, valuation of properties, welfare movements, etc. Prerequisites: Coal Mining 82.

Second semester; Professor Callen.

86. **Mine Design.** (2 Hrs.) The projection of mine workings and the design of mining plants to meet given conditions; preparation of working drawings, and estimates of material and cost. Prerequisite: Coal Mining 82 and registration in Structural Engineering 144.

First semester; Professor Callen and Mr. Lawall.

87. **Mine Design.** (3 Hrs.) Continuation of Mine Design 86, which is prerequisite.

Second semester; Professor Callen and Mr. Lawall.

88. **Mine Methods.** (4 Hrs.) Prospecting; topographical and geological considerations affecting opening and development; a study of the coal fields and mining methods of West Virginia and the United States. Prerequisite: Coal Mining 82.

Second semester; Mr. Lawall.

89. **Elementary Mineralogy.** (1 Hr.) A study of the physical properties, entrance, occurrence, association and alteration of about one hundred of the common mineral species and varieties, particularly the rock-forming minerals and those of economic importance. The object of this course is to enable one to recognize at sight the minerals that are likely to be met in connection with engineering work. Prerequisite: Chemistry 2.

Either semester; Mr. LAWALL.

90. **Mine Surveying.** (3 Hrs.) This course is given in the first three weeks following the end of the sophomore year. Practice supplementing Mine Surveying 80.

Summer term; eighteen working days, 8:00-12:00, and 1:00-5:00; Professor CALLEN and Mr. LAWALL.

92. **Oil and Gas Production.** (2 Hrs.) Leases and royalties; drilling and management of wells; valuation of oil and gas properties; reports on properties and prospects; size and scope of oil and gas companies; markets and supply; varieties and uses of refinery and other products of oil and gas. Addresses by oil and gas producers and other experts. Prerequisite: Geology 13.

Second semester; Assistant Professor SCHEFFEL, 112 M. H.

95. **Mining Laboratory.** (3 Hrs.) Crushing, pulverizing, sizing and washing tests on various coals; special problems in coking, briquetting, etc. Prerequisite: senior standing in mining engineering.

Second semester; Professor CALLEN.

96. **Coal Laboratory.** (1 Hr.) Coal sampling; proximate analysis of coal; analysis of mine air. Prerequisite: Chemistry 6.

First semester; Professor CALLEN.

98.* **Geological Surveying.** (2 Hrs.) The application of transit and plane table work to topographic and geological surveying. Prerequisite: Advanced Surveying 102 and Field Geology 17.

Second semester; Mr. LAWALL.

99. **Thesis.** (3 Hrs.) An individual problem on some phase of mining. None but exceptional students having high scholastic standing will be permitted to elect this course.

RAILWAY AND HIGHWAY ENGINEERING AND SURVEYING.

Professor MORRIS, Mr. BRAGONIER and Mr. NELSON.

100.* Land Surveying. (3 Hrs.) Required of all candidates for degrees in civil and mining engineering. Theory and practice of land surveying. Lectures, recitations, field practice.

Second semester; Professor MORRIS and Mr. BRAGONIER.

101.* Surveying. (1 Hr.) Primarily for first year students. Required for degrees in mechanical and electrical engineering. Theory and use of the compass, transit and level, the laying out and measuring of areas and leveling. Prerequisite: Plane trigonometry.

Second semester; Professor MORRIS and Mr. BRAGONIER.

102. Advanced Surveying. (2 Hrs.) Continuation of Surveying 100. Transit and stadia surveys, leveling, plane table, elementary hydrographic surveying and field astronomy.

First semester; Professor MORRIS.

103. Topographical Surveying. (2 Hrs.) Theory and practice of topography, hydrographic and barometric surveying. Lectures, recitations, field practice and map drawing. Prerequisite: Land surveying 100.

Second semester; Professor MORRIS.

104. Railway Location. (3 Hrs.) Theory and practice of railroad surveying. Lectures, recitations, field work, and drawing. Searles' Field Engineering. Prerequisite: Land surveying 100.

First semester; Professor MORRIS.

105. Railway Construction and Maintenance. (3 Hrs.) Tunnels, trestles, track-work, earth-work, signalling, grading, masonry, and drawing. Prerequisite: Railway location 104.

First semester; Professor MORRIS.

106. Roads and Pavements. (3 Hrs.) Location, construction and maintenance; study and comparison of various types of roads; road making materials, lectures, recitations and field work.

First semester; Professor MORRIS.

107. Railroad Economy. (2 Hrs.) General theory of railroad location; effect of grades, curvature, and distance on operating expenses and revenue; railroad finance and management.

Second semester; Professor MORRIS.

108. Highway Economics. (2 Hrs.) Continuation of Roads and pavements 106, with special reference to permanent improvements

and maintenance of existing roads. Re-surveys, re-location, drainage, etc.

Second semester; Professor MORRIS.

109. Surveying. (1 Hr) Surveying practice supplementing Courses Nos. 100, 102, and 103. Prerequisite: Topographical surveying 103.

Summer term; first six working days, 8:00-12:00, and 1:00-5:00; Professor MORRIS.

110. Railroad Surveying. (2 Hrs.) Surveying practice supplementing Railway location 104. Prerequisite: Railway location 104.

Summer term; first twelve working days, 8:00-12:00, and 1:00-5:00; Professor MORRIS.

113. Thesis. (3 Hrs.) Optional thesis requirement for the degree of B.S.C.E. (See page 143).

Second semester; hours to be arranged; Professor MORRIS.

STEAM, GAS, AND EXPERIMENTAL ENGINEERING.

Professor GRUMBEIN and Mr. MILLER.

120. Heat Engineering. (3 Hrs.) Course in elementary steam and gas engineering. Arranged especially for civil and mining engineering students. Prerequisite: Physics 7.

First semester; Professor GRUMBEIN.

121.* Thermodynamics of Engineering. (3 Hrs.) Mechanical theory of heat, thermodynamics of gases and vapors with special application to steam and other heat engines, compressed air and refrigeration. Prerequisites: Physics 6 and 2, and Integral calculus.

First semester; Professor GRUMBEIN.

122.*† Heat Engines. (3 Hrs.) Continuation of Thermodynamics 121.

Second semester; Professor GRUMBEIN.

123.† Power Plant Design. (3 Hrs.) The study of steam, gas and hydro-electric plants; selection of prime movers and auxiliary machinery for central and isolated stations; location of the plant; arrangement, sub-division into units and installation; economics, organization and management of power plants. Prerequisite: Thermodynamics 121.

First semester; Professor GRUMBEIN.

124. Steam Boilers. (2 Hrs.) Heating value of fuels, combustion, economical production of steam; application of theory and prac-

tice in the design of steam boilers, chimneys, and accessories. Prerequisites: Machine design 35 and Thermodynamics 121.

Hours to be arranged; Professor GRUMBEIN.

125.† **Steam Turbines.** (3 Hrs.) Theory and design of the steam turbine. Prerequisite: Heat engines 122.

Second semester; Professor GRUMBEIN.

126.† **Gas Engines and Gas Engineering.** (3 Hrs.) The study of fuel gases, gas production and transmission, gas engines, etc. Prerequisite: Heat engines 122.

Second semester; Professor GRUMBEIN.

127.*† **Heating and Ventilating.** (3 Hrs.) Optional for students in mechanical engineering. Principles, comparative merits and design of various systems of ventilating, and heating. Prerequisite: Thermodynamics 121, or Heat Engineering 120.

Second semester; Professor GRUMBEIN.

130. **Mechanical Laboratory.** (2 Hrs.) Theory, calibration and use of steam engine indicators, steam gages, thermometers; calorimeter tests of coal and natural gas; testing lubricating oil; analysis of flue gases; efficiency tests of simple engines and pumps. Prerequisite: Physics 6 and Statics 70, and accompanying Heat Engineering 120 or Thermodynamics 121.

First semester; Professor GRUMBEIN and Mr. MILLER.

131. **Mechanical Laboratory.** (2 Hrs.) Continuation of Mechanical laboratory 130. Tests of wrought iron, cast iron, steel, timber, stone, brick, cement, and concrete. Prerequisite: Mechanical laboratory 130 and Mechanics of materials 71.

Second semester; Professor GRUMBEIN and Mr. MILLER.

132. **Engineering Laboratory.** (2 Hrs.) Tests of boilers and engines, air compressors, fans, and blowers, hydraulic motors, steam heating apparatus, etc.; valve setting; flow of steam through orifices and pipes; application of Hirn's analysis. Prerequisite: Mechanical laboratory 131.

First semester; Professor GRUMBEIN and Mr. MILLER.

133.† **Engineering Laboratory.** (2 Hrs.) Continuation of Laboratory 132. Combined tests of performances of boilers, engines, electrical and other power transmission machinery; testing of power plans; special research work. Prerequisite: Engineering laboratory 132.

Second semester; Professor GRUMBEIN and Mr. MILLER.

134. (G) **Engineering Laboratory.** Commercial tests and research work. Prerequisite: Engineering laboratory 133. Credit will be given on the basis of the time spent in the laboratory and the progress of the students.

Hours to be arranged; Dean JONES and Professor GRUMBEIN.

135. **Thesis.** (3 Hrs.) Investigation or original research on some special topic relating to steam, gas or experimental engineering.

Second semester; Dean JONES and Professor GRUMBEIN.

136.† **Highway Laboratory.** Open to fourth year and graduate students in civil, mechanical and mining engineering. Testing of stone, brick, sand, clay, concrete and bituminous and other materials entering into road construction, etc. Credit will be given on basis of time spent in the laboratory and the progress of the student.

Hours to be arranged; Professor GRUMBEIN.

STRUCTURAL AND HYDRAULIC ENGINEERING.

Professor DAVIS and Mr. NORCROSS.

141. **Roofs and Bridges.** (4 Hrs.) Design of beams, girders, roofs and bridge trusses both analytically and graphically. Complete design of a wooden roof truss, including detailed drawing. Prerequisite: Mechanics of materials 71.

Second semester; Professor DAVIS.

142. **Bridge Design.** (4 Hrs.) Computations and drawings are made for the complete design of a riveted or pin-connected Pratt truss bridge. The computations determine the sections of all members, as well as the details, splices, riveting, etc. Prerequisite: Roofs and bridges 141.

First semester; Professor DAVIS.

143. **Advanced Structures.** (3 Hrs.) Loading and stresses in cantilevers, continuous girders and trusses, swing bridges, and metal and concrete arches. Prerequisite: Roofs and bridges 141.

Second semester; Professor DAVIS.

144. **Structural Engineering.** (3 Hrs.) A course of three recitations per week devoted to the study of the loads and stresses in simple beams, trusses and mine structures. Prerequisite: Mechanics of materials 71.

First semester; Professor DAVIS.

145.† **Steel Building Design.** (3 Hrs.) Mill and office buildings of steel. Design of trusses, beams, columns, and bracing for all loads; critical study of details, methods of erection, weights and costs. A

small mill building is completely designed and shop drawings made for it. Prerequisite: Roofs and bridges 141.

Either semester; Professor Davis.

146.† Foundations and Masonry. (3 Hrs.) Sheet piling, coffer dams, cribs, metal cylinder piers, pneumatic caissons, open caissons, etc., building foundations and underpinning. Earth pressure, masonry and design of abutments, piers, gravity walls and spread footing. Prerequisites: Mechanics of materials 71, and Mechanical laboratory 130.

First semester; Professor Davis.

147. Concrete Construction. (3 Hrs.) Mechanics underlying the design of concrete beams and columns; experimental investigations and methods of construction; design of concrete buildings, reniforced concrete retaining walls and concrete arches. Prerequisites: Roofs and bridges 141.

Second semester; Professor Davis.

148. Sanitary Engineering. (2 Hrs.) A study of the design, construction and maintenance of sewers and appurtenances, and of the modern methods of sewage disposal. Prerequisite: Hydraulics 73.

Second semester; Professor Davis.

149. Water Supply Engineering. (3 Hrs.) The quantity of water required for cities and towns, hydrology of drainage basins, stream flow and ground supplies; design of reservoirs, standpipes, etc.; the quality of water and water purification. Prerequisite: Hydraulics 73.

First semester; Professor Davis.

159. Microscopy of Drinking Water. (2 Hrs.) Required for students who elect course in sanitary engineering. Classification of the microscopic organisms and study of those organisms and their elimination which produce tastes and odors in public water supplies. Prerequisite: Bacteriology 1.

First semester; Mr. Norcross.

150.† Water Power Engineering. (3 Hrs.) Design and construction of high masonry dams, analytically and graphically; stream flow, turbines, economics of water power development, etc. Prerequisite: Hydraulics 73.

Second semester; Professor Davis.

151.† Hydraulic Measurements. (1 Hr.) Volume of water flowing in open channels by floats and current meters. Measurement of small quantities by orifices, weirs, and other devices. Periodicals

searched for experimental data. Prerequisite: Hydraulics 73.
Either semester; Professor DAVIS.

152. Thesis. (3 Hrs.) Special design, investigation or original research on some assigned topic relating to structural, hydraulic or sanitary engineering.

Second semester; Professor DAVIS.

153. Sewage and Water Purification Works. (2 Hrs.) A continuation of Courses 148 and 149. A detailed study of the principles and practice of the design and operation of water and sewage purification works. Prerequisites: Sanitary engineering 148 and Water supply engineering 149.

Both semesters; Mr. NORCROSS.

154. (G) Statically Indeterminate Structures. For graduate students. A continuation of Course 143. Study of various methods of design of statically indeterminate structures such as principle of least work, use of auxiliary load of unity, methods of angle changes, elastic deformation, etc. Theories of flat slabs; secondary stresses, etc. Prerequisite: Course 143.

Credit and hours to be arranged.
Both semesters; Professor DAVIS.

155. (G) Advanced Bridge Design. For graduate students. Computation and drawings made for some type of statically indeterminate structure. Prerequisite: Courses 143 and 142.

Credit and hours to be arranged.
Both semesters; Professor DAVIS.

156. Materials of Construction. (2 Hrs.) A study of the materials used in engineering construction, including iron, steel, timber, concrete, stone, clay products, etc. Prerequisite: Mechanics of materials 71.

First semester.

157. (G) Advanced Water Power Engineering. For graduate students. A continuation of course 150 with special emphasis on hydrology and the design of turbines.

Credit and hours to be arranged.
Both semesters; Professor DAVIS.

158. (G) Statically Indeterminate Structures. For graduate students. A continuation of Course 154.

Credit and hours to be arranged.
Both semesters; Professor DAVIS.

CHEMICAL AND METALLURGICAL ENGINEERING.

Professor HODGE.

171.*† **Metallurgy of Iron and Steel.** (2 Hrs.) Chemical, mechanical and physical principles applied in the manufacture of iron and steel. Prerequisites: Chemistry 6 and Mechanical Laboratory 131.

First semester; Professor HODGE.

172.* **Metallurgy Laboratory.** (1 Hr.) To accompany course 171. Preparation and microscopical examination of twenty specimens of iron and steel; analytical determination.

First semester; Professor HODGE.

173.† **Metallurgy, Non-Ferrous.** (2 Hrs.) Separation of the important commercial metals other than iron from ores and their manufacture into marketable products. Prerequisites: Chemistry 6 and Mechanical Laboratory 131.

Second semester; Professor HODGE.

Not offered during 1922-23.

174.† **Metallurgy Laboratory.** (2 Hrs.) Macroscopic and microscopic study of the structure of metals and alloys as related to their properties and uses. Prerequisites: Metallurgy 171 and 173 and Chemistry 21.

Second semester; Professor HODGE.

Not offered during 1922-23.

178.† **Fuels.** (3 Hrs.) Comparative fuel values of coal, coke, oil and gas for different industrial and engineering purposes. Gasoline recovery from natural gas; technical analysis of liquid and gaseous fuels. Recitations and laboratory.

Either semester; Professor HODGE.

180.† **Benzene Derivatives.** (2 Hrs.) Manufacture of commercial products from benzene and related compounds; intermediates, dyes, drugs and explosives. Prerequisite: Chemistry 9. Recitation and laboratory.

Second semester; Professor HODGE.

181.† **Chemical Engineering and Manufactures.** (2 Hrs.) Applications of engineering and chemical principles to the chemical industries, grinding, calcining, crystallization, lixiviation, evaporation, distillation, drying. Flow sheets, problems in losses, efficiency, costs. Types of equipment available, power requirements, inspection trips. Prerequisites: Chemistry 21 and Mechanical Laboratory 131.

First semester; Professor HODGE.

182.† **Industrial Chemistry Laboratory.** (2 Hrs.) To accompany course 181. Manufacture on small scale of industrial chemicals; qualitative and quantitative tests for purity of products. Use of refractometer, polariscope, colorimeter, melting point and distillation tests as applied in the chemical industries.

First semester; Professor HODGE.

183.† **Chemical Engineering and Manufactures.** (2 Hrs.) Continuation of course 181 dealing largely with manufacture of industrial organic chemicals.

Second semester; Professor HODGE.

184.† **Chemical Engineering Laboratory.** (2 Hrs.) To accompany course 183. Continuation of course 182.

185. (G) **Thesis.** (2 Hrs.) Primarily for seniors in chemical engineering and graduate students. Some problem in chemical engineering or industrial chemistry is selected for investigation. A carefully prepared report is required. Credit is given in proportion to time put in and results obtained.

Either semester; Professor HODGE.

186.† **Oil Refining Laboratory.** (2 Hrs.) Separation of crude petroleum into its commercial products. Distillation of oil shale. Specifications, tests and analyses of gasoline, kerosene, fuel and lubricating oils. Prerequisites: Chemistry 9 and Mechanical Laboratory 131.

Second semester; Professor HODGE.

190. (G) **Electrochemical Industries.** (3 Hrs.) Primarily for graduate students; open to qualified chemical engineering seniors. Methods of using electrical energy to refine metals and manufacture chemicals. Electrolytic, electric furnace and electric arc processes. Prerequisites: Electrical Engineering 53, 530 and Chemistry 21.

Second semester; Professor HODGE.

192. (G) **Biochemical Industries.** (3 Hrs.) Primarily for graduate students; open to qualified seniors in chemical engineering. Engineering problems and chemical processes involved in manufactures based on biological resources; wood distillation, pulp, paper and carbohydrate products, tannins, soaps, hydrogenation of oils, drying oils, terpenes, rubber and the fermentation industries. Prerequisites: Chemical Engineering 183 and 184.

First semester; Professor HODGE.

193. (G) **Coal Tar and By-Products.** Open only to graduate students and qualified seniors in chemical engineering. Washing and

distillation of coal tar, purification of resulting products. By-product plant tests, analyses, and control. Prerequisites: Courses 180, 183 and 184.

Second semester; Professor HODGE.

196. (G) Research Problems. (5 to 10 Hrs.) More advanced and extended work on research problems than can be given in course 185. Credit in proportion to work done but as a general rule no student will be allowed to register for this course who cannot put in time equivalent to 8 hours credit per semester for two consecutive semesters. Prerequisites: Chemical Engineering 183 and 184.

Either semester; Professor HODGE.

GENERAL AND MISCELLANEOUS.

165. Engineering Lectures. (No credit). Required of all freshmen in engineering. A series of lectures designed to acquaint the engineering student at the beginning of his course with the profession he has chosen. Factors determining choice of engineering as a profession; the various kinds of engineering and the ability, training, opportunities, and responsibilities involved in each; problems and difficulties of the engineering student; the engineering point of view as appled to the student's daily environment and college life.

First semester; W. 4:30 p. m.; Dean JONES and staff.

161.* Business Law. (3 Hrs.) A brief study of the general principles of business law; a study of the law of contracts and of standard contract forms. Prerequisite: Economics 115 or 1 and 2 and Mechanics 71.

First semester; Professor BOOMSLITER.

162. Engineering Society. (1 Hr.) Primarily for third year students. Required of all candidates for degrees in engineering. Membership, attendance and active participation in the Engineering Society. See special announcements, page 10.

Throughout the year; bi-weekly; Professor GRUMBEIN; 226 M. H.

163. Engineering Society. (1 Hr.) For fourth year and graduate students. Required of all candidates for degrees in engineering. Continuation of Engineering Society 162.

Throughout the year; bi-weekly; Professor GRUMBEIN; 226 M. H.

164. Summer Practice. (2 Hrs.) Required of all candidates for degrees in engineering. At least six weeks of practical experience in some branch of engineering activity, preferably of a character that will articulate with the student's major subjects. Students are recommended to spend all vacation periods in practical work but under exceptional circumstances the Faculty of the College of Engineering

may permit the substitution of an approved practical course taken in residence. Application for summer credit should be made before beginning the work; and the work done should be certified and reported in accordance with the special rules for Summer Practice, on or before October 1st, after the work has been done. Work may be done during any vacation period.

INDUSTRIAL EDUCATION.

Professor MACLIN.

201. Organization and Administration. (2 Hrs.) A detailed study will be made of the various national and state vocational education acts and their application to our educational needs. The organization of schools, classes and subject matter for the purpose of teaching.

First semester; Professor MACLIN.

202. Methods of Teaching. (2 Hrs.) The topics considered will be: getting subject matter into an effective instructional order, methods of approach, defining a lesson, organization of a lesson, teaching the lesson. Some practice teaching. Prerequisite: Course 201.

Second semester; Professor MACLIN.

203. Foreman Training. (2 Hrs.) This course is intended to train men to organize and train men in industrial plants for the job of foreman. Some of the topics considered are: an analysis of the job of foreman, training foremen to analyize their job,, organization of foreman training classes under the Smith-Hughes act.

Second semester; Professor MACLIN.

205. Part-time Education. (2 or 3 Hrs.) A study involving the place of the part-time school in American education; types of part-time schools; laws governing and controlling part-time education; courses of study; methods of teaching; equipment and school programs; vocational contact of teachers; surveys of local industries and positions of students; vocational guidance.

First semester; Professor MACLIN.

206. Trade Analysis and Teaching. (3 Hrs.) A brief study of the national and state vocational education acts and their application to our industrial and educational needs. The organization of schools and classes and the organization and presentation of vocational and related subjects in the class room.

Second semester; Professor MACLIN.

221. Vocational Education. (2 Hrs.) This is a general course intended to acquaint school superintendents, principals and administrators with the various state and national acts in the field of vocational education and the requirements necessary to secure aid. Among the topics considered are: types of vocational classes to meet local needs, organization of classes under the Smith-Hughes law, courses of study, qualifications of teachers and equipment.

First semester; Professor Maclin.

THE COLLEGE OF AGRICULTURE

FACULTY AND STAFF.

FRANK BUTLER TROTTER, A.M., LL.D., *President of the University*

————————————, *Dean*

THOMAS CLARK ATKESON, PH.D., *Professor of Animal Husbandry. Emeritus.*

CHARLES HERMAN WINKLER, PH.D., *Professor of Vocational Agricultural Education and State Supervisor of Vocational Agriculture.*

NAHUM JAMES GIDDINGS,[1] PH.D., *Professor of Plant Pathology*

MAXWELL JAY DORSEY, PH.D., *Professor of Horticulture*

LEONARD MARION PEAIRS, M.S., *Professor of Entomology*

ERNEST LEE ANTHONY, B.S.AGR., M.S., *Professor of Dairy Husbandry*

EDWARD ALEXANDER LIVESAY, M.S., AGR., *Professor of Animal Husbandry*

RACHEL HARTSHORN COLWELL, A.M., *Professor of Home Economics*

CHARLES AUGUSTUS LUEDER, D.V.M., *Associate Professor of Veterinary Science*

EDGAR LEWIS ANDREWS, B.S.AGR., *Associate Professor of Poultry Husbandry*

ANDREW JACKSON DADISMAN, B.S.AGR., M.S., *Associate Professor of Farm Economics*

HARLEY LUCIUS CRANE, B.S.AGR., M.S.AGR., *Associate Professor of Horticulture*

HARRY EDWARD KNOWLTON, PH.D., *Associate Professor of Horticulture*

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[1]Acting for Dean and Director.

RALPH JOHN GARBER, M.S., *Associate Professor of Agronomy*

EUGENE PEYTON DEATRICK, PH.D., *Associate Professor of Soils*

ROLAND HARRISON PATCH,[2] M.S., *Assistant Professor of Horticulture*

HARRY ORAM HENDERSON, M.S., *Assistant Professor of Dairy Husbandry*

HOWARD BUSHNELL ALLEN, M.S., *Assistant Professor of Agricultural Education*

MARION FLORILLA BRECK, M.S., *Assistant Professor of Education and Home Economics*

KYLE CHESTER WESTOVER, B.S., *Assistant Professor of Horticulture*

THEODORE EUGENE ODLAND, M.S., *Assistant Professor of Agronomy*

JOHN HARWOOD LONGWELL, M.S., *Assistant Professor of Animal Husbandry*

PAUL CHARLES ROUZER, B.S., AGR., *Instructor in Agricultural Education*

ERNEST ANGELO, B.S.AGR., *Instructor in Horticulture*

CHARLES VINYARD WILSON, B.S.AGR., *Instructor in Animal Husbandry*

ELEANOR REED MACLAY, B.S. IN EDUC., *Instructor in Home Economics*

MARY ALICE MILNER, B.S.H.E., *Instructor in Home Economics*

CHARLES CLAUDE ANDERSON, M.S., *Instructor in Vocational Education*

FERRIS DEWEY CORNELL, B.S.AGR., *Instructor in Farm Mechanics*

RETA BURNICE RUTLEDGE, B.S. IN EDUC., *Instructor in Home Economics*

KARL SPANGLER QUISENBERRY, B.S.AGR., *Instructor in Agronomy*

MARGARET JANE CHAMBERS, B.S., *Instructor in Home Economics*

ROBERT ROSEBERRY JAMISON, B.S.AGR., *Instructor in Horticulture*

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*[2]Resigned February 1, 1922.

GOLDAN ORLANDO HALL, B.S.AGR., *Assistant in Poultry Husbandry*

HAROLD JAMES BARRETT, M.S., *Assistant in Soils*

PAUL RUSSELL CUTRIGHT, A.B., *Assistant in Entomology*

HENRY GRANGER KNIGHT, PH.D., *Director of Experimental Work*

BERT HOLMES HITE, M.S.,[1] *Chemist*

WILLIAM EARL RUMSEY, B.S.AGR., *State Entomologist*

HORACE ATWOOD, M.S.AGR., *Poultryman*

THEODORE CLINTON McILVANE,[2] M.S., *Assistant Agronomist in Charge of Sub-Station at Maggie, W. Va.*

LUTHER FRANCIS SUTTON, B.S., B.S.AGR., *Assistant Horticulturist and Superintendent of Reymann Memorial Experimental Farm*

ANTHONY BERG,[2] B.S., *Assistant Plant Pathologist*

FRANK BATSON KUNST, A.B., *Assistant Chemist*

CHARLES EDWARD WEAKLEY, JR., *Assistant Chemist*

ROSS HOLMAN TUCKWILLER,[2] B.S.AGR., *Assistant in Beef Cattle Investigations*

BENJAMIN B. KAPLAN, A.B., *Assistant Chemist*

THOMAS JOSSEPH COCHRANE, B.S., *Assistant Chemist*

THEODORIC BRYANT LEITH, A.B., *Assistant Chemist*

JAMES HARVEY SHAFFER, B.S.AGR., *Assistant Farm Economist*

EVERETT CHARLES SHERWOOD, M.S., *Assistant Plant Pathologist*

JOHN CHARLES JOHNSTON, *Chief Clerk of Experiment Station*

NAT TERRY FRAME, B.A., *Director of Agricultural Extension, in Charge Rural Organization*

HU SWISHER VANDERVORT, B.S.AGR., *Assistant Director, in Charge Agronomy, Horticulture and Dairy Extension*

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[1]Died, October 5, 1921.
[2]In cooperation with U. S. Department of Agriculture.

BELTON BONNER EZELL,[2] B.S., *Assistant Director, in Charge Live Stock Extension*

WILLIAM HENRY KENDRICK, B.S., *Assistant Director, in Charge* 4-H *Clubs*

CHARLES HENRY HARTLEY,[1] B.S.AGR., *Assistant Director, in Charge Extension Schools, Institutes, Exhibits, etc.*

CHARLES ELLSWORTH STOCKDALE, B.S.AGR., *Agricultural Editor*

EDWARD LEE SHAW, B.S.AGR., *Extension Specialist in Sheep*

BENJAMIN FRANKLIN CREECH, B.S.AGR., *Extension Specialist in Beef, Cattle and Hogs*

RALPH LEON MASON, *Extension Specialist in Poultry*

DAVID ROLLIN DODD, B.S.AGR., *Extension Specialist in Agronomy*

HUGH WILLARD PRETTYMAN, B.S.AGR., *Packing School Superintendent*

DEE CRANE, *Extension Specialist in Potatoes*

ENOS JOHNSON PERRY, B.S.AGR., *Extension Specialist in Dairying*

THOMAS DAVIS GRAY, B.S., *Extension Specialist in Horticulture*

MARGARET FORD,[1] B.S.H.E., *District Home Demonstration Agent*

HAZEL M. HORSEFALL,[1] B.S.H.E., *Assistant in* 4-H *Club Work*

FRANCES FOLSOM McGUIRE,[1] A.B., M.A., *District Home Demonstration Agent*

ROSS BRADSHAW JOHNSTON, *University News Service*

JEANNETTA WEIL, *Chief Clerk*

FACULTY COMMITTEES.

AGRICULTURAL STUDENTS' COURSES AND HOURS: Professors WINKLER, PEAIRS, and ANTHONY.

HOME ECONOMICS STUDENTS' COURSES AND HOURS: Professor COLWELL, and Assistant Professor BRECK.

FARM OPERATIONS: Associate Professor DADISMAN, Professor ANTHONY, Associate Professor GARBER, Associate Professor KNOWLTON and Mr. WILSON.

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[1]In cooperation with United States Department of Agriculture.
[2]Resigned, April 1, 1922.

ORGANIZATION.

All the agricultural and home economics work of the University is organized under the College of Agriculture. For the purposes of administration the college is divided into four branches, viz:

I. The Agricultural Experiment Station, organized for research and experimental work.

II. Resident instruction in agriculture.

III. Resident instruction in home economics.

IV. Extension work for all citizens of the State who desire instruction in agriculture and home economics while living on the farm. This work is given by the Division of Agricultural Extension.

The primary divisions of the work of the College of Agriculture should be clearly distinguished. Some of its staff are engaged in college instruction, experiment station research and extension teaching; few of them give their entire time to instruction; a few give their entire time to experiment station work and several are engaged entirely in extension work.

I. THE WEST VIRGINIA AGRICULTURAL EXPERIMENT STATION.

The Experiment Station was established by the Board of Regents in 1887, by authority of an act of Congress known as the Hatch Act. Further support was given by an act of Congress known as the Adams Act, approved June 30, 1906. From the appropriations made by Congress under these acts the Station derives an annual income of thirty thousand dollars. Section 2 of the Hatch Act fully states the object and purpose of the Experiment Station as follows:

"That it shall be the object and duty of said experiment station to conduct original researches or verify experiments on the physiology of plants and animals; the diseases to which they are severally subject with the remedies for the same; the chemical composition of useful plants at their different stages of growth; the comparative advantages of rotative cropping as pursued under varying series of crops; the capacity of new plants or trees for acclimation; the analysis of soils and water; the chemical composition of manures, natural or artificial, with experiments designed to test their comparative effects on crops of different kinds; the adaption and value of grasses and forage plants; the composition and digestibility of the different kinds of foods for domestic animals; the scientific and economic questions involved in the production of butter and cheese; and such other researches and experiments bearing directly on the agricultural industry of the United States as may in each case be deemed advisable, having due regard to the varying conditions and needs of the respective states and territories."

The State Legislature makes appropriations for the same purposes. During the last biennial period these appropriations amounted to forty-five thousand dollars a year.

Bulletins and annual reports setting forth results of experiments and investigations conducted at the station are published for gratuitous distribution, and will be mailed to any citizen of the state applying for them.

The Experiment Station is engaged solely in research and investigation, the results of which, with those of similar institutions, form the basis of teaching of the College of Agriculture, including the work of the Extension Division.

For further information concerning the work of the Experiment Station write the director.

II. INSTRUCTION IN AGRICULTURE.

AIM AND SCOPE.

The training given by the College of Agriculture is designed to fit its students for farm life, or for work as teachers, field workers, or investigators of agricultural subjects. A large part of the course consists of technical work in the various branches of agriculture. The aim in these courses is to make plain the principles underlying agricultural science, and to give as much practice work as facilities will permit, so that the student will receive a training fitting him for efficient work. The curriculum is planned to give the student a general knowledge of all phases of agriculture, but at the same time to afford him an opportunity to specialize in the subjects in which he is particularly interested. A thorough training in the general sciences underlying scientific agriculture is given.

EQUIPMENT.

The administrative offices and many of the laboratory and class rooms of the College of Agriculture are in a new building, Oglebay Hall, which was completed and occupied February 15, 1919. This building which is 188 feet long and four stories high contains on the basement floor the creamery and dairy laboratories, a four-chambered cold storage plant and ice machine, the station mailing room and laboratories for horticulture, animal husbandry and agronomy. The first floor is devoted to offices and reading rooms, agronomy and plant physiology laboratories, and the food and textile laboratories of the home economics department. The second floor houses the Extension Division and provide six recitation rooms and three sewing laboratories. On the upper floor are the departments of botany, plant pathology, entomology, farm economics, poultry husbandry, veterinary science and agricultural education.

The College of Agriculture now has 700 acres of land lying close to the university buildings. This land has been definitely organized into a series of five farms operated respectively by the animal husbandry, dairy husbandry, poultry husbandry, agronomy, and horticultural departments.

There have recently been erected a barn and judging pavilion on the lower campus, a horse barn and a beef cattle barn on the animal husbandry farm. The barn on the agronomy farm has been remodeled and there is now under construction on the poultry farm a three-story building for feed storage, incubation and brooding, together with several other small colony and brooding houses.

The new dairy barn of imposing type and modern construction is being built and will be ready for use by the fall term of 1922. This will be one of the best dairy barns in the state and will have all modern conveniences and equipment for class use.

The greenhouse establishment has recently been greatly enlarged and made modern in all respects. The dairy buildings have been greatly improved.

With Oglebay Hall, the old experiment station building, the old horticultural hall, the new barns and live stock hall, and the new greenhouses, hot beds and cold frames, equipment is available for a thorough and complete training in the science and art of farming. Laboratories are provided for all phases of dairy husbandry, animal husbandry, poultry, veterinary science, agronomy, horticulture, entomology, plant pathology, farm management and agricultural education, and the greenhouses, farms and barns afford facilities for practical work in which the principles taught in the classroom and laboratory may be tested and put into practice.

REYMANN MEMORIAL FARM.

Through the gift of Anton Reymann and Paul O. Reymann of Wheeling, West Virginia, executors of the estate of Lawrence A. Reymann, deceased, the University came into possession on March 1st, 1917, of the Reymann Memorial Experiment Farm, including 930 acres of land on the Capon River in Hardy County, and a herd of more than 100 head of pure bred Ayreshire cattle. The farm is given for the use of the College of Agriculture for experimental work in all phases of agricultural science.

There is located on the farm a fully equipped cheese factory which is turning out a fancy grade of American full cream cheese. The products of this factory won a silver medal at the National Dairy Show at Columbus, Ohio, and received a score exceeded only by cheese from the famous factories of Wisconsin. The exceptional quality of the cheese from this factory has created a demand for its products far in excess of its present output, and an attempt is being made to promote the industry in this and other regions of the state.

DEMONSTRATION FRUIT GRADING AND PACKING PLANT.

The Sate Legislature of 1919 provided funds with which to construct a demonstration fruit grading and packing plant to be operated by the College of Agriculture. The plant is located at Inwood, in Berkeley County, in the heart of the territory commonly known as "Apple Pie Ridge," in which not only apples are grown in great variety and in large quantities, but many other fruits are produced. The plant is operated from early July until the late fall.

ENTRANCE REQUIREMENTS.

For admission to the College of Agriculture the student must have credit for fifteen units of secondary school work, i. e., the work of a standard four-year high school.

A. The following groups are required:

(1) Four units of English.

(2) Three units in one other subject.

(3) Two units in a third subject.

(4) Two units in a fourth subject.

(5) Four units elective.

B. Work in the following subjects not to exceed the number of units placed after each subject will be accepted.

English	4 units	Science[3]	
		Physics	1 unit
Foreign languages[2]		Chemistry	1 unit
Latin	4 units	Biology	1 unit
Greek	3 units	Botany	1 unit
French	3 units	Geology	1 unit
German	3 units	Zoology	1 unit
Spanish	2 units	General science	1 unit
Italian	2 units	Physical geography	½ unit
		Physiology	½ unit
Mathematics		Hygiene and sanitation	½ unit
Algebra	1½ units		
Plane geometry	1 unit	Vocational subjects (not to exceed four units in all.)	
Solid geometry	½ unit	Agriculture	3 units
Trigonometry	½ unit	Household arts	3 units
		Manual training	3 units
History and economics		Bookkeeping or bookkeeping and commercial arithmetic	2 units
History	3 units		
Civics	1 unit		
Elementary economics and sociology	1 unit	Shorthand and typewriting	2 units
		Commercial geography	½ unit
Education	2 units	Commercial Law	½ unit
Drawing		Music:—violin, organ or piano[4]	2 units
Free-hand drawing	1 unit		
Mechanical drawing	1 unit		

[2]Not less than two units of one foreign language will be accepted for entrance.
[3]A group of two units in science may be made by combining one unit each of physics and chemistry or one unit each of any two of the following: biology, botany, zoology, geology. A group of three units in science may be made by combining one unit each of any three of the following: physics, chemistry, biology, botany, zoology, geology.
[4]For conditions governing credit for music see page 59 of the University catalogue.

FARM OPERATIONS.

The faculty stongly recommends that students who have not had practical farm experience spend at least one year on a first-class general farm before pursuing the course. It is impossible for students who have not had farm experience to secure the fullest benefit of the course.

On entering the college, each student will be examined as to his ability to perform the various operations necessary to carry on farm work and as to his knowledge of farming. A failure to pass this examination will not exclude him from college; another opportunity will be provided at the beginning of the second year to pass off the requirement. If the student then fails he will be required to remain at the college farm during the summer vacation between his second and third year, or to work for the same period on some farm approved by the committee in charge. Weekly reports of the farm operations will be required and he will receive his final examination of the subject at the beginning of the junior year. In case of continued failure, the student's degree will be withheld until he shall satisfy the requirements. This work will be reported on as a preparatory study, and will have no credit as a part of the required work of the course.

DEGREES.

REQUIREMENTS FOR THE DEGREE OF BACHELOR OF SCIENCE IN AGRICULTURE.

Credits Required.

The degree of Bachelor of Science in Agriculture may be conferred upon any student who satisfies the entrance requirements, and offers one hundred and forty-four semester hours credit for college courses, including all requirements set forth below.

The "semester hour" is the standard for computing the amount of work required for graduation. The "hour" represents the amount of work done in one semester (eighteen weeks) in one recitation hour with two preparation hours a week, or in three hours' practice or laboratory work requiring no outside preparation. No student is permitted to register for less than fifteen hours or more than twenty hours of work in any one semester without special permission.

Classification of Students.

To be classified as a conditioned freshman in the College of Agriculture a student must have credit for at least fifteen units of entrance requirements; to be classified as a regular freshman he must have fulfilled all entrance requirements. To be classified as a sophomore he must have credit for 26 hours of college work; as a junior, 64 hours; and as a senior, 100 hours.

Summer Courses.

It will be noted that many of the courses described in the following pages are also given in the summer school. In many cases these courses may be pursued to better advantage during the summer. Students who are admitted with advanced standing or students who for any reason may be compelled to do so, may complete the prescribed course for the degree of Bachelor of Science in Agriculture by taking full work for two summer sessions (12 hours each) and three academic years, but only students of exceptional ability or mature age should undertake such a curriculum, which should be arranged with the dean in advance.

Admission With Advanced Standing.

Students from other institutions will be given credit for work already done in accordance with the general rules for advanced standing. (See University Catalogue), but at least one year of resident work not less than thirty hours of which must be in the College of Agriculture, will be required for the baccalaureate degree in agriculture.

Required and Elective Subjects.

Of the one hundred and forty-four hours required for the degree, eighty-five are prescribed for all students, as indicated in the curriculum below. Students who are not required to take military science must substitute elective credits. The remaining fifty-nine hours' credit must be elected from such courses as may be approved by the class officer. Of these not more than thirty hours may be elected from the College of Arts and Sciences or from other colleges. The remainder must be elected from the College of Agriculture. (See page 15.)

Under no circumstances will a degree in agriculture be granted unless the student has completed a total of sixty credit hours in the College of Agriculture.

Class Officer.

The dean of the College of Agriculture will act as class officer for all freshmen and sophomore students in the College of Agriculture. The head of the department in which the student elects to take his major will be his class officer for the junior and senior years.

Graduate Work.

Graduates of the College of Agriculture, or from institutions with equivalent work, may be admitted to the University as candidates for the dgree of Master of Science, (M.S.Agr.), under the conditions prescribed by the University Catalogue.

Special Students.

Attention is directed to the fact that persons of maturity who have had approximately two years of high school work may enter the College of Agriculture as special students under the provisions as set forth in the University catalogue. These students will be admitted to all elementary classes in agriculture and will receive a thorough training in the practical phases of scientific agriculture. Special provisions are made for disabled soldiers and those taking strictly vocational courses.

Under-Graduate Curriculum.

Most of the courses provided for freshmen and sophomore students are definitely required as set forth in the following outline of courses. These requirements will be modified only in exceptional cases where students who enter with advanced standing or who have other irregularities in their schedule cannot follow the curriculum on account of conflicts. In such cases students will be permitted to offer other courses deemed satisfactory to the Committee on Students' Courses and Hours. The same rule applies in case of courses prescribed for junior and senior students.

CURRICULUM LEADING TO THE DEGREE OF BACHELOR OF SCIENCE IN AGRICULTURE.

Freshman Year—First Semester.

Agricultural botany	(Botany 1)	8:00 or 9:00 M. W. F. two Lab.	4	
Rhetoric and comp.	(English 1)	8:00 or 10:00 M. W. F.	3	
Inorganic chemistry	(Chem. 1)	9:00 or 11:00 T. Th. S. two Lab.	4	
Farm dairying	(Dairy 21)	8:00 or 10:00 T. Th. one Lab.	3	
Animal husbandry	(An. Husb. 40)	9:00 or 11:00 M. W. F. one Lab.	4	
Military science	(1)	1:00 M. T. Th. F.	1	19

Freshman Year—Second Semester.

Agricultural botany	(Botany 2)	8:00 or 9:00 M. W. F. two Lab.	4	
Rhetoric and comp.	(English 2)	8:00 or 10:00 M. W. F.	3	
Inorganic chemistry	(Chem. 2)	9:00 or 11:00 T. Th. S. two Lab.	4	
Vegetable gardening	(Hort. 3)	8:00 or 10:00 T. Th. one Lab.	3	
Farm poultry	(Poultry 1)	9:00 or 11:00 M. W. F. one Lab.	3	
Introduction to agri.	(Agr. 1)	10:00 M.	1	
Military science	(2)	1:00 M. T. Th. F.	1	19

Sophomore Year—First Semester.

Introductory physics	(Phys. 1)	8:00 M. W. F.	3	
Physics laboratory	(Phys. 2)	10:00-12:00 T. or Th.	1	
English literature	(English 26)	8:00 T. Th.	2	
General bacteriology	(Botany 10)	10:00 M. F. one laboratory	3	
Elementary pomology	(Hort. 2)	9:00 T. Th. one laboratory	3	
Farm crops	(Agronomy 2)	9:00 M. W. F. one laboratory	4	
Military science	(3)	1:00 M. T. Th. F.	1	17

Sophomore Year—Second Semester.

Introductory physics	(Phys. 3)	8:00 M. W. F.	3	
Physics laboratory	(Phys. 4)	10:00 T. or Th.	1	
English literature	(English 27)	8:00 T. Th.	2	
*Agricultural zoology	(Zool. 24)	10:00 M. W. F. two Lab. W. S.	5	
Rural economics	(Farm Econ. 2)	9:00 M. T. W. F.	4	
General entomology	(Entomol. 1)	11:00 M. W. F. one laboratory	4	
Military science	(4)	1:00 M. T. Th. F.	1	20

REQUIRED WORK—JUNIOR AND SENIOR YEARS.

First Semester.

**Organic chemistry	(Chem. 16)	9:00 T. Th. one laboratory	3
General geology	(Geology 2)	9:00 M. W. F.	3
General geol. lab.	(Geology 21)	10:00-12:00 Th.	1

Second Semester.

The properties of soils	(Soils 1)	11:00 T. Th. one laboratory	3

*Zoology 1 and 2 may be substituted.
**Chemistry 9 may be substituted.

MAJOR SUBJECTS.

Upon registering at the beginning of the junior year each student will indicate to the dean the department in which he wishes to do major work, and will be referred to the head of that department as his class officer (See page 14). The curricula given below are suggestive except as regards required subjects, and may be varied by the class officer to meet the needs of individual students, but indicate the subjects which are usually advised for students desiring to take major work in the respective departments.

State Teachers' Certificates.

Students taking courses given by the department of education, to the amount of twenty hours, approved by that department, will be eligible for state teachers' certificates. (For details see page 51 of the University catalogue). Students taking ten hours will be eligible as teachers of vocational agriculture, but twenty hours is recommended.

Agricultural Education.

Students may choose as a major either general agricultural education or vocational agricultural education.

Junior Year—First Semester.	Hrs.	Junior Year—Second Semester.	Hrs.
*Chemistry 16	3	** Agricultural Education 36	3
**Education 23	3	**Education 28	2
***Education 14 and 10	3	Elective	10-15
Elective	6-14		

Senior Year—First Semester.	Hrs.	Senior Year—Second Semester.	Hrs.
**Observation and Practice Teaching (either semester)	2	*Botany 10	3
		*Farm Econ. 2	4
		***Agr'l Ed. 35	2
***Education 6, 20, 27 or 30	2-3	***Education 7 or 26	3
Electives	10-18	Electives	3-13

Courses marked with a single (*) are required of all students in the College of Agriculture.

Courses marked with a double (**) are required of students who select their major in this department and wish to qualify for teaching vocational agriculture.

Courses marked with a triple (***) are recommended to all and required in addition to other courses for those who wish to qualify as high school principals or supervisors.

Agronomy and Soils.

Junior—First Semester.	Hrs.	Junior—Second Semester.	Hrs.
*Chemistry	3	*Soils 1	3
*Geology 2	3	Agronomy (Elective)	3
*Geology 21	1	Elective	12 18
Botany 12	5		
Agronomy (elective)	3		
Elective	3 18		

Senior—First Semester.	Hrs.	Senior—Second Semester.	Hrs.
Soils 2	2	Agronomy (electives)	3
Plant pathology 4	3	Elective	15 18
Genetics 21	3		
Elective	10 18		

*Required courses.

Animal Husbandry.

Junior Year—First Semester	Hrs.	Junior Year—Second Semester.	Hrs.
*Chemistry 16	3	Agronomy 10	3
Animal husbandry 45	2	Animal husbandry 42	3
Animal husbandry 41	2	Veterinary science 2	3
Veterinary science 1	3	Mechanical drawing 23	2
*Geology 2	3	Elective	7
*Geology 21	1		18
Elective	4 18		

Senior Year—First Semester.	Hrs.	Senior Year—Second Semester.	Hrs.
Genetics 21	3	Animal husbandry 43	3
Animal husbandry 44	2	Animal husbandry 50	1
Animal husbandry 47	2	Veterinary science 5	2
Animal husbandry 50	1	*Soils 1	3
Veterinary science 3	2	Elective	9 18
Elective	8 18		

Dairy Husbandry.

Junior Year—First Semester.	Hrs.	Junior Year—Second Semester.	Hrs.
*Chemistry 16	3	Veterinary science 2	3
Dairy husbandry 24	3	Dairy husbandry 26	3
Animal husbandry 45	2	Agronomy 10	3
Veterinary science 1	3	Mechanical drawing 23	2
Elective	7 18	Elective	7 18

Senior Year—First Semester.	Hrs.	Senior Year—Second Semester.	Hrs.
*Geology 2	3	*Soils 1	3
*Geology 21	1	Dairy husbandry 23	4
Genetics 21	3	Elective	11
Dairy husbandry 27	4		18
Elective	7 18		

Entomology.

Junior Year—First Semester.	Hrs.		Junior Year—Second Semester.	Hrs.	
*Geology	4		*Soils 1	3	
*Chemistry 16	3		Horticulture 5	3	
Horticulture 4	4		Entomology 2 or 9	2	
Entomology 21	3		Entomology 30	2	
Entomology 3	3	17	Entomology 4	2	
			Botany 5	3	
			Elective	3	18

Senior Year—First Semester.	Hrs.		Senior Year—Second Semester.	Hrs.	
Entomology 4	2		Entomology 5	3	
Zoology 9	3		Zoology 10	3	
Zoology 6	3		Horticulture 25	2	
Plant pathology 4	3		Horticulture 28	2	
Elective	6	17	Elective	7	17

(At least one year of modern language is recommended.)

Farm Economics.

Junior Year—First Semester.	Hrs.		Junior Year—Second Semester.	Hrs.	
*Chemistry 16	3		Farm economics 1	3	
Sociology 10	3		Farm economics 12	1	
Economics 1	3		Farm economics 8	2	
Elective	9	18	Economics 2	3	
			Farm economics 4	3	
			Elective	6	18

Senior Year—First Semester.	Hrs.		Senior Year—Second Semester.	Hrs.	
Economics	3		Farm economics 9	2	
*Geology 2	3		*Soils 1	3	
*Geology 21	1		Farm economics 7	2	
Elective	11	18	Economics 6	4	
			Electives	7	18

Farm Mechanics.

Junior Year—First Semester.	Hrs.		Junior Year—Second Semester.	Hrs.	
Engineering 20 (Mechanical drawing)	2		Engineering 2 (Woodworking)	1	
*Chemistry 16	3		Farm mechanics 24	3	
Farm mechanics 25	4		*Soils 1	3	
*Geology 2	3		Elective	11	18
*Geology 21	1				
Elective	5	18			

Senior Year—First Semester.	Hrs.		Senior Year—Second Semester.	Hrs.	
Farm mechanics 26	2		Farm mechanics 28	2	
Engineering 7 (Forging)	1		Farm mechanics 29	2	
Elective	15	18	Elective	14	18

Horticulture—Pomology.

Junior Year—First Semester.	Hrs.		Junior Year—Second Semester.	Hrs.	
Horticulture 4	4		Horticulture 7	4	
*Chemistry 16	3		Horticulture 5	3	
'Geology 2	3		*Soils 1	3	
*Geology 21	1		Horticulture 11	1	
Botany 12	5		Entomology 9	2	
Horticulture 16	1		Mechanical drawing 23	2	
Horticulture 11	1	18	Elective	2	17
Senior Year—First Semester.	**Hrs.**		**Senior Year—Second Semester.**	**Hrs.**	
Horticulture 21	4		Horticulture 14	3	
Genetics 21	3		Horticulture 11	1	
Soils 2	2		Horticulture 28	2	
Horticulture 11	1		Horticulture 10	2	
Plant pathology 4	3		Elective	9	17
Horticulture 10	2				
Elective	2	17			

Horticulture—Vegetable Gardening.

Junior Year—First Semester.	Hrs.		Junior Year—Second Semester.	Hrs.	
*Chemistry 16	3		Entomology 9	2	
*Geology 2	3		Horticulture 5	3	
*Geology 21	1		Horticulture 8	3	
Horticulture 22	3		*Soils 1	3	
Botany 12	5		Horticulture 11	1	
Horticulture 11	1		Mechanical drawing 23	2	
Elective	2	18	Elective	4	18
Senior Year—First Semester.	**Hrs.**		**Senior Year—Second Semester.**	**Hrs.**	
Genetics 21	3		Horticulture 14	3	
Soils 2	2		Horticulture 27	3	
Plant Pathology 4	3		Horticulture 11	1	
Horticulaure 11	1		Horticulture 10	2	
Horticulture 10	2		Elective	6	15
Elective	7	18			

Poultry Husbandry.

Junior Year—First Semester.	Hrs.		Junior Year—Second Semester.	Hrs.	
*Geology 2	3		*Soils 1	3	
*Geology 21	1		Farm Economics 1	3	
*Chemistry 16	3		Poultry husbandry 8	2	
Poultry husbandry 7	3		Animal husbandry 45	2	
Animal husbandry 42	3		Poultry husbandry 11	1-3	
Veterinary science 1	3		Elective	5-7	18
Poultry 9	1				
Elective	1	18			
Senior Year—First Semester.	**Hrs.**		**Senior Year—Second Semester.**	**Hrs.**	
Poultry husbandry 10	1-3		Poultry husbandry 10	1-3	
Zoology 10	3		Poultry husbandry 11	1-3	
Genetics 21	3		Farm Economics 7	2	
Poultry 12	3		Electives	10-14	18
Elective	6-8	18			

*Required Courses—All students.

REQUIREMENTS FOR CANDIDATES FOR B.S. AGR. DEGREE WHO ALREADY HOLD THE DEGREE AB. OR B.S.

Students who have received the degree of Bachelor of Arts or Bachelor of Science from West Virginia University or any institution of similar standing, may receive a degree of Bachelor of Science in Agriculture upon the following conditions;

(1) The completion of Physics 1, 2, 3, 4, Chemistry 1, 2, Botany 1, 2, and Zoology 24, or equivalent courses.

(2) The completion of the thirty-two hours of courses in the College of Agriculture required in the curriculum on page 15.

(3) The completion of at least twenty-eight hours of elective courses in the College of Agriculture.

Attention is called to the fact that fifteen hours from the following courses may be credited toward the A.B. degree in the College of Arts and Sciences. (See University Catalogue).

Subject.	Hours.
Agronomy 2 (Farm crops)	4
Soils 1 (Soil fertility)	3
Animal husbandry 40 (Introductory animal husbandry)	4
Dairy husbandry 21 (Farm dairying)	3
Animal husbandry 42 (Feeding farm animals)	3
Animal husbandry 43 (Breeding farm animals)	2
Animal husbandry 45 (animal nutrition)	2
Entomology 21 (Genetics)	3
Farm economies 1 (Farm management)	3
Horticulture 2 (Elementary pomology)	3
Horticulture 3 (Elementary vegetable gardening)	3
Poultry husbandry 1 (Farm poultry)	3

The following courses are regular electives both in the College of Agriculture and in the College of Arts and Sciences:

Subject.	Hours.
Entomology, courses 1, 2, 3, 4, 5, 6, and 9	18-24
Farm economics 2 (Rural economics)	4
Agricultural education 35 (Methods in agricultural Extension)	3
Agricultural journalism 12	2

Students who desire the advantage of the broader training secured by first taking a degree in the College of Arts and Sciences, and who then expect to take the degree of Bachelor of Science in Agriculture, may so arrange their curriculum as to enable them to take sufficient of the elective courses above mentioned to secure the degree in agriculture in one year or in one year and a summer school session after receiving the first degree.

COURSES OF INSTRUCTION.

Only the technical courses offered primarily for the students in agriculture are described here. For detailed description of the other courses listed as required or elective in the agricultural curriculum, see the announcement of courses in the College of Arts and Sciences or other colleges.

Admission to any advanced elective course is conditional upon the consent of instructor.

Courses marked by an asterisk (*) may be offered for credit in the College of Arts and Sciences. Courses marked by a double-asterisk are regular electives in the College of Arts and Sciences.

Course descriptions in a college catalog rarely convey more definite information as to the content of the course than might be inferred from the title. For this reason all such descriptive matter has been omitted from these announcements of courses. Detailed information as to the extent and subject matter of any course, will however, be furnished on request to the dean of the college.

AGRICULTURE.

Professor WINKLER.

1. Introduction to Agriculture. (1 Hr.) Required of all freshmen. Other students not admitted for credit.

Second semester; hours to be arranged.

AGRICULTURAL EDUCATION.

Professor WINKLER, Assistant Professor ALLEN, Mr. ANDERSON, and Mr. ROUZER.

The courses in this department are provided for under the Federal Vocational Education Act. They are open to only a limited number of students besides those who are following the prescribed courses to become teachers of vocational agriculture. Students should therefore arrange with the department before registering.

Courses 34 and 37 may be done in extension, but not for graduate credit.

40. Problems of Rural Education. (2 Hrs.) A consideration of those forces of rural life which are responsible for a progressive program of country betterment in so far as education is a contributing factor. It should be of special value to sophomores who are deciding upon their major interest in lines of agriculture.

Either semester; M. W., 11:00.

50. Rural Organization. (3 Hrs.) A study of the social, economic, political and other factors affecting rural life.

Either semester; M. W. F., 10:00.

35. Methods of Agricultural Extension. (2 Hrs.)

Second semester; T. Th., 11:00.

36. Vocational Agricultural Education. (3 Hrs.) For seniors. Required of students to qualify as special teachers, directors or supervisors of vocational agriculture in the secondary school, as provided for under the Smith-Hughes Act.

Either semester; M. W. F., 9:00.

37. Directed Teaching. (2 to 5 Hrs.) Required of all students in order to qualify on graduation for teaching vocational agriculture.

Either semester; hours and credit to be arranged by conference.

34. Special Problem. (2 to 5 Hrs.) Open to advanced undergraduate and graduate students.

Either semester; hours to be arranged.

AGRICULTURAL JOURNALISM.

Mr. STOCKDALE.

****12. Agricultural Journalism.** (2 Hrs.) Instruction and practice in preparing articles for farm periodicals. Prerequisite: English 1 and 2 or consent of instructor.

First semester; M. F., 10:00.

13. Agricultural Journalism. (1 Hr. per semester.) A practice course for juniors and seniors. Prerequisite: Agricultural Journalism 12 or consent of instructor.

First and second semester; hours to be arranged.

AGRONOMY.

Associate Professor GARBER, Assistant Professor ODLAND and Mr. QUISENBERRY.

2. Farm Crops. (4 Hrs.) A general introductory course with emphasis on the practical aspects of production. Prerequisite to all other courses in the department.

First semester; M. W. F., 9:00 and one laboratory.

3. Cereals. (3 Hrs.) An advanced study of the small grains and corn. Laboratory exercises in variety identification, scoring and judging, and in determining market grades according to federal standards.

First semester; T. Th., 11:00, and one laboratory.

10. Forage Crops. (3 Hrs.) An advanced study of the forage grasses and legumes. Some attention also given to noxious weeds.

Second semester; T. Th., 10:00, and one laboratory.

15. Breeding of Field Crops. (3 Hrs.) Methods of improving crop plants by breeding. For advanced undergraduate or graduate students.

Second semester; T. Th., 11:00, and one laboratory.

12. Research in Farm Crops. (1 to 5 Hrs. per semester). For graduate students and advanced undergraduates.

First and second semester and summer; hours to be arranged.

ANIMAL HUSBANDRY.

Professor LIVESAY, Assistant Professor LONGWELL, Mr. WILSON and Mr. SHAW.

40. Introductory Animal Husbandry. (4 Hrs.) Required of freshmen. Study of breeds, types and market classes of farm animals and their care and feeding.

First semester; M. W. F., 9:00 or 11:00, and one laboratory. This course is prerequisite to all other courses in the department.

41. Livestock Judging. (2 Hrs.) Judging breeding and fat classes of livestock.

First semester; two laboratories.

***42. Feeding Farm Animals.** (3 Hrs.) Prerequisite: Animal Husbandry 45.

Second semester; M. W. F., 11:00.

***43.† Breeding Farm Animals.** (3 Hrs.) Elective. Evolution of domestic animals; history of their systematic breeding and improvement. Prerequisite: Genetics 21. Open to graduate students.

Second semester; M. W. F., 10:00.

44.† Advanced Stock Judging. (2 Hrs.) Students taking this course will be required to participate in a tour of inspection of representative flocks, herds and studs. Prerequisite: Animal Husbandry 41. Open to graduate students.

First semester; two laboratories.

45.† Animal Nutrition. (2 Hrs.) Composition of feeds and the metabolism of food nutrients. Open to graduate students.

First semester; T., 11:00, and one laboratory. Hours to be arranged.

47.† Herd and Flock Book Study. (2 Hrs.) Open to graduate students.

First semester; hours to be arranged.

49.† **Research.** (1 to 5 Hrs. per semester.) Intended primarily for advanced undergraduate and graduate students.
First and second semesters; hours to be arranged.

50.† **Animal Industry Seminar.** (1 Hrs. per semester.) Required of seniors and graduate students.
First and second semesters; hours to be arranged.

51. **Thesis.** (1 to 2 Hrs. per semester.) Open to graduate students.
First and second semesters; hours to be arranged.

52. **Summer Practice.** (1 Hr.) To be arranged in consultation with the head of the department.

60. **Beef Production.** (3 Hrs.) Elective.
Second semester; T. Th., 9:00 and one laboratory.

61. **Horse and Mule Production.** (3 Hrs.)
First semester; T. Th., 9:00 and one laboratory.

62. **Mutton and Wool Production.** (3 Hrs.)
Second semester; T. Th., 10:00 and one laboratory.

63. **Pork Production.** (3 Hrs.)
Second semester; T. Th., 11:00 and one laboratory.

65. **Meats.** (1 Hr.) Prerequisite: Animal Husbandry 41.
Second semester; hours to be arranged.

64. **Meats.** (2 Hrs.) Farm butchering, curing and care of meats. Visit to one of the large packing houses of Pittsburgh required of all students taking this course. Prerequisite: Animal Husbandry 65.
First semester; hours to be arranged.

DAIRY HUSBANDRY.

Professor ANTHONY and Assistant Professor HENDERSON.

21. **Farm Dairying.** (3 Hrs.) Required of freshmen. An elementary course of dairy principles. This course is prerequisite to all other courses in the department.
First semester; T. Th., 9:00 or 10:00, one laboratory.

23. **Milk Production.** (4 Hrs.) For juniors, seniors and graduates.
Second semester; M. W. F., 9:00; one laboratory.

24. Purebred Dairy Cattle. (3 Hrs.) The study of breed types, families and pedigrees.

First semester; T. Th., 8:00; one laboratory.

25. Dairy By-Products. (3 Hrs.) A study of ice cream manufacture; fermented milks, milk sugar, condensed milk.

First semester; two class periods and one laboratory. Hours to be arranged.

26. Butter and Cheese Manufacture. (3 Hrs.)

Second semester; T. Th., 8:00; laboratory hours to be arranged.

27. Market Milk. (4 Hrs.) Handling, treatment and distribution of market milk, bacteriological studies. Prerequisite: Botany 10.

First semester; T. Th., 9:00; two laboratories.

34. Special Problems. (1 or 2 Hrs. per semester). For seniors and graduate students.

First and second semesters; hours to be arranged.

35. Summer Practice. (1 Hr.) Course to be arranged in consultation with the head of the department.

36. Dairy Chemistry. (2 Hrs.) For seniors and graduates. Prerequisite: Dairy Husbandry 25 and 26.

First semester; hours to be arranged.

37. Advanced Dairy Judging. (1 Hr.) For juniors, seniors and graduates. Judging dairy cattle and dairy products. Prerequisite: Dairy Husbandry 24.

Second semester; hours to be arranged.

38. Graduate Research. (1 to 5 Hrs. per semester.) For graduates only. Special assigned dairy problems.

Hours to be arranged.

39. Thesis. (1 to 3 Hrs.) For graduate students only. In conjunction with 38.

Hours to be arranged.

ENTOMOLOGY.

Professor PEAIRS and Mr. CUTRIGHT.

1. **General Entomology. (4 Hrs.) Required of sophomores. A beginning study of insects.

Second semester; M. W. F., 11:00, and one laboratory.

This course is prerequisite to all other courses in the department excepting course 6.

2. **Economic Entomology. (2 Hrs.) A study of injurious insects.

Second semester; T. Th., 10:00.

3. **Advanced General Entomology. (3 Hrs.) A continuation and elaboration of course 1. Prerequisite: Consultation.

Open to graduate students.

4. **Systematic Entomology. (1 to 3 Hrs. per semester.) Classification of insects.

Both semesters and summer school; hours to be arranged.

Open to graduate students.

5. **Research. (1 to 3 Hrs. per semester.) For advanced students and graduates.

Both semesters and summer school; hours to be arranged.

6. **Insects and Disease. (1 Hr.) The relation of insects to human disease.

Second semester; hours to be arranged.

8. **Thesis.** (1 to 3 Hrs.) Primarily for graduates.

9. **Horticultural Entomology. (2 Hrs.) The insect pests of horticultural crops

Second semester; M. F., 10:00.

Genetics.

21. **Genetics.** (3 Hrs.) A study of the principles of heredity.

First semester; M. F., 10:00, one laboratory. Open to graduates.

22. **Genetics.** (1 Hr.) Special laboratory work to follow Course 21..

Second semester; hours to be arranged. Open to graduates.

Apiculture

30. Bee-keeping. (2 Hrs.) Spring and summer bee-keeping methods.

One lecture and one laboratory period weekly. Hours to be arranged.

Second semester.

31. Bee-keeping. (1 Hr.) Fall and winter bee-keeping practice. Hours to be arranged. First semester. (To follow Course 30.)

FARM ECONOMICS.

Associate Professor DADISMAN and Mr. SHAFFER.

1. Farm Management. (3 Hrs.) Open to juniors and seniors. Choosing, equipping and operating farms. Prerequisite: Farm Economics 2.

Second semester; M. W. F., 9:00.

2. Rural Economics. (4 Hrs.) Required of sophomores. The study of economics as related to all phases of rural life.

Second semester; M. T. W. F., 8:00.

3. Advanced Farm Management. (2 or 3 Hrs.) Open to seniors who have had Farm Management I, and graduate students. Special farm problems.

Second semester; hours to be arranged.

4. Development of Agriculture. (3 Hrs.)

Second semester; M. W. F., 10:00.

6. Thesis. (1 or 2 Hrs. per semester.)

Either semester; hours to be arranged.

7. Marketing Agricultural Products. (2 Hrs.) A study of principles and methods. One day or more will be spent in Pittsburgh studying livestock, fruit and vegetable markets.

Second semester; T. Th., 11:00.

8. Farm Records and Accounts. (2 Hrs.) A study of farm inventories, records and cost accounts.

Second semester; hours to be arranged.

9. Land Problems. (2 Hrs.) Open to seniors and graduate students. Land systems and policies, settlements, tenure, and utilization.

Second semester; T. Th., 10.00.

12. Farm Management Laboratory. (1 Hr.) A laboratory course to accompany Farm Management I.

FARM MECHANICS.

Mr. CORNELL.

25. **Farm Mechanics.** (4 Hrs.) A general course dealing with the fundamentals of farm machinery.
First semester; M. W. F., 8:00 and one laboratory.

26. **Farm Structures.** (2 Hrs.) Planning, designing, construction, and cost of farm buildings.
First semester; hours to be arranged.

24. **Farm Machinery.** (3 Hrs.) A detailed study of the construction and testing of field machinery.
Second semester; hours to be arranged. Two lectures and one laboratory.

28. **Farm Power.** (2 Hrs.) Open to senior and graduate students. A study of gas, oil, steam, water, wind and electric power on the farm.
Second semester; hours to be arranged. One lecture and one laboratory.

29. **Special Problems in Farm Mechanics.** (2 Hrs.) Open to seniors and graduate students.
Second semester; hours to be arranged.

HORTICULTURE.

Professor DORSEY, Associate Professor KNOWLTON, Associate Professor CRANE, Assistant Professor WESTOVER, Assistant Professor ————, Mr. ANGELO, and Mr. JAMISON.

Pomology.

2. **Elementary Pomology.** (3 Hrs.) Required of sophomores. An introduction to the study of fruit growing.
First semester; T. Th., 9:00 and one laboratory.

4. **Systematic Pomology.** (4 Hrs.) A systematic study of the economic fruits. Prerequisite: Horticulture 2.
First semester; M. W. F., 8:00 and one laboratory.

5. **Small Fruits.** (3 Hrs.) A study of the bush and vine fruits. Prerequisite: Horticulture 2.
Second semester; T. Th., 9:00 and one laboratory.

7. **Commercial Fruit Production.** (4 Hrs.) Given for graduate credit. Prerequisite: Horticulture 4.
Second semester; M. W. F., 9:00 and one laboratory.

9. Horticultural Field Trip. (1 Hr.) Given for graduate credit. A trip of one week will be made through the fruit regions of Eastern West Virginia, Virginia, Maryland and Pennsylvania. Prerequisite: Horticulture 4 and 7.
First semester.

16. Fruit Judging. (1 Hr.) Prerequisite: Horticulture 4.
First semester; one laboratory.

18. Advanced Fruit Judging. (1 Hr.) A continuation of Horticulture 16.
First semester; one laboratory.

21. (G) Packing, Marketing and Storage. (4 Hrs.) Given for graduate credit. Prerequisite: Horticulture 4 and 7.
First semester; M. W. F., 9:00 and one laboratory.

26. (G) Sub-Tropical Horticulture. (2 Hrs.) Given for graduate credit. Omitted in 1923. Prerequisite: Horticulture 4.
First semester; T. Th., 10:00.

28. (G) Sprays and Spraying. (2 Hrs.) Given for graduate credit. One lecture and one laboratory. Prerequisite: Consultation.
Second semester; hours to be arranged.

Vegetable Gardening.

3. Elementary Vegetable Gardening. (3 Hrs.) Required of freshmen.
Second semester; T. Th., 8:00; one laboratory.

8. Commercial Vegetable Gardening. (3 Hrs.) Prerequisite: Horticulture 3 and 22.
Second semester; T. Th., 10:00; one laboratory.

22. Systematic Olericulture. (3 Hrs.) A study of the classification of vegetables. Prerequisite: Horticulture 3.
First semester; M. F., 10:00; one laboratory.

27. Vegetable Forcing. (3 Hrs.) Prerequisite: Horticulture 3 and 22.
First semester; T. Th., 9:00; one laboratory.

Landscape Gardening and Floriculture.

6. Greenhouse Construction. (2 Hrs.) One lecture and one laboratory.
First semester; hours to be arranged.

14. Rural Landscape Gardening. (3 Hrs.) Prerequisite: Horticulture 25.

Second semester; T. Th., 8:00; one laboratory.

15. Commercial Floriculture. (3 Hrs.)

First semester; T. Th., 8:00; one laboratory.

24. Advanced Commercial Floriculture. (3 Hrs.) Prerequisite: Horticulture 15.

Second semester; T. Th., 9:00 and one laboratory.

25. Ornamental Plant Materials. (2 Hrs.) One lecture and one laboratory.

First semester; hours to be arranged.

General Courses.

10. Special Problems. (1 or 2 Hrs. per semester.) Arrangements must be made for problems before the close of the junior year.

First and second semesters; hours to be arranged.

11. Horticultural Seminar. (1 Hr. per semester.) For juniors, seniors, and graduate students in Horticulture.

First and second semesters; Monday, 4:30.

12. (G) Advanced Horticulture. (3 Hrs.) Given for graduate credit. Prerequisite: Horticulture 4 and 7.

Second semester; M. W. F., 9:00.

17. Summer Practice. (1 Hr.) Work to be arranged in advance by consultation with head of department.

19. (G) Horticultural Crop Breeding. (3 Hrs.) Given for graduate credit. Prerequisite: Genetics 21.

Second semester; M. W. F., 11:00.

23. (G) Plant Growth. (3 Hrs.) Given for graduate credit. Prerequisite: Botany 12.

First semester; M. W. F., 11:00.

29. (G) Graduate Research. (5 Hrs. per semester.) For graduate students only.

First and second semester; hours to be arranged.

PLANT PATHOLOGY.

Professor GIDDINGS.

4. **Economic Plant Pathology.** (3 Hrs.)
First semester; one lecture and two laboratories. Hours to be arranged.

1.† **Experimental Plant Pathology.** (2 to 5 Hrs. per semester.) For undergraduate and graduate students.
First and second semesters; hours to be arranged.

2.† **Research.** (1 to 5 Hrs. per semester.) For seniors and graduate students. Prerequisite: Plant Pathology 4 or its equivalent. Students who plan to take the course should confer with the head of the department before the close of their junior year.
First and second semesters; hours to be arranged.

3.† **Thesis.** (1 to 2 Hrs.) Open to seniors or graduate students.
First and second semesters; hours to be arranged.

POULTRY HUSBANDRY.

Associate Professor ANDREWS and Mr. HALL.

1. **Farm Poultry.** (3 Hrs.) Required of freshmen. Prerequisite for all other courses.
Second semester; M. F., 10:00 and one laboratory.

5. **Housing and Feeding.** (2 Hrs.) Lectures and laboratory. Hours to be arranged.

6. **Incubation, Brooding and Rearing of Chicks.** (2 Hrs.) Lectures and practice.
Second semester; hours to be arranged.

7. **Breeds and Breeding.** (3 Hrs.)
First semester; T. Th., 10:00 and one laboratory.

8. **Marketing.** (2 Hrs.) Lectures and practice.
Second semester; W., 10:00 and one laboratory.

9. **Poultry Diseases and Parasites.** (1 Hr.) Lectures and laboratory.
First and second semesters; hours to be arranged.

10.† **Research.** (1 to 3 Hrs. per semester.) A study of methods of investigation together with the working out of some original problems. Open to graduate students.
Either semester; hours to be arranged.

11.† **Poultry Practice.** (1 to 3 Hrs. per semester.) Practice in incubation, brooding, flock management, etc. (Open to graduate students.)

Either semester; hours to be arranged.

12.† **Advanced Poultry Judging.** (3 Hrs.) Lectures and practice in judging poultry. Prerequisite: Poultry 7. (Open to graduate students.)

Either semester; hours to be arranged.

SOILS.

Associate Professor DEATRICK, Assistant Professor ————————, Mr. ————————.

1. **The Properties of Soils.** (3 Hrs.) Required of juniors. Prerequisite: Chemistry 1 and 2, Physics 1, 2, 3, 4, Biology, Geology.

Second semester; T. Th., 11:00, and one laboratory.

2. **Principles of Soil Management.** (2 Hrs.) Prerequisite: Soils 1.

First semester; T. Th., 11:00.

3. **Advanced Course.** (3 Hrs.) Work assigned is suited to individual needs of student.

Summer or either semester; hours to be arranged.

4. **(G) Graduate Course.** (1 to 5 Hrs. per semester.)

Summer or either semester; hours to be arranged.

VETERINARY SCIENCE.

Associate Professor LUEDER.

1. **Anatomy and Physiology.** (3 Hrs.)

First semester; T. Th., 10:00 and one laboratory.

2. **Veterinary Medicine and Surgery.** (3 Hrs.)

Second semester; T. Th., 9:00 and one laboratory.

3. **Infectious Diseases.** (2 Hrs.)

First semester. Prerequisite: Botany 10 and Veterinary Science 1, one lecture and one laboratory. Hours to be arranged.

5. **Parasites of Farm Animals.** (2 Hrs.)

Second semester. Prerequisite: Entomology I and Veterinary Science I, one lecture and one laboratory. Hours to be arranged.

III. INSTRUCTIONS IN HOME ECONOMICS.

ORGANIZATION.

For purposes of administration the department is organized under the College of Agriculture. The work involves three lines:

1. In the College of Agriculture a prescribed curriculum is outlined whereby students may select as their major either general home economics or vocational home economics in preparation for the degree of Bachelor of Science in Home Economics.

2. In the College of Arts and Sciences students working for the degree of Bachelor of Arts may take home economics as a major and must meet the requirements for the degree as prescribed by that college (page). The head of the department of home economics acts as class officer for such students.

3. Extension work in home economics is given under the direction of the Division of Agricultural Extension.

AIM AND SCOPE.

The course leading to the degree of Bachelor of Science in Home Economics is planned for women students and especially for those who wish to teach home economics in vocational schools and other institutions or to learn the business of home keeping. The aim of the course is to give women such training as will best prepare them to assume their responsibilities as members of a household and a community. This training includes: first, a knowledge of those sciences which are fundamental to an understanding of the principles of home economics; second, technical courses in food, shelter, and clothing which will enable the student to establish standards of living; third, a general knowledge of the law of production and consumption obtained from courses in history and sociology; an appreciation and intelligent use of English is developed through courses in oral and written English and in a study of English literature.

To provide for this training a curriculum is prescribed. Sufficient electives are allowed to permit the student to qualify for vocational home economics, or to take special courses in agriculture, or to select other courses in which she is interested.

EQUIPMENT.

The department occupies two floors of the wing of Oglebay Hall. On the first floor are two large well equipped food laboratories, a suite of rooms consisting of dining room, and kitchen and reception room, a textile laboratory, a reading room, and the offices of the department. On the second floor there are three textile laboratories equipped with sewing machines and electric motor attachments. There is also on this floor a large recitation room for demonstrations.

ENTRANCE REQUIREMENTS.

For admission to the course leading to the degree of Bachelor of Science in Home Economics, the requirements are the same as for admission to the course in agriculture. (See page 11.)

REQUIREMENTS FOR THE DEGREE OF BACHELOR OF SCIENCE IN HOME ECONOMICS.

Credits Required.

The degree of Bachelor of Science in Home Economics will be conferred upon any student who satisfies the entrance requirements and offers one hundred and twenty-eight hours credit for college courses.

The "semester hour" is the standard in computing the amount of work required for graduation. The "hour" represents the amount of work done in one semester (eighteen weeks) and in one recitation hour with two preparation hours a week, or in three hours practice or laboratory work requiring no outside preparation. No student is permitted to register for less than fourteen hours or more than seventeen hours of work in any one semester.

Required and Elective Courses.

Of the one hundred and twenty-eight hours credit required for the degree eighty-nine hours are definitely prescribed as indicated in the curriculum which follows. The remaining thirty-nine hours' credit must be elected from such courses as may be prescribed by the class officer. The required and elective courses in the subject of home economics must amount to not fewer than forty hours in all.

To qualify for the vocational home economics certificate, the student must take the following courses in addition to those listed in the curriculum:

Home Economics, 51, 52, 26 and 27.

Education 4, 5, 10 and 22.

Elective courses in education, 3 hours.

For students interested in extension work the following courses are recommended: Home economics 50; Horticulture 2 and 3; Poultry husbandry 1; Dairy husbandry 21; Agricultural education 35.

Class Officer.

The head of the department of home economics will act as class officer.

All students who wish to enter the university for the purpose of taking home economics should confer with the head of the department before registering.

Thesis.

Each candidate for the degree of Bachelor of Science in Home Economics may be required to prepare a thesis on some subject related to the work in home economics. The thesis will be based upon the student's personal work. The subject of the thesis must be presented in writing to the head of the home economics department by the first of November of the academic year in which the student is a candidate for a degree. The completed thesis must be presented for approval not later than thirty days prior to commencement day.

Classification of Students.

To be classified as a conditioned freshman a student must have credit for at least fifteen units of entrance requirements; to be classified as a regular freshman she must have fulfilled all entrance requirements. To be classified as a sophomore she must have credit for twenty-five hours of college work; as a junior fifty-eight hours; as a senior, ninety-two hours.

Curriculum Leading to the Degree of B. S. H. E.

Freshman Year—First Semester.

		Hrs.
English I	8:00 M. W. F.	3
Chemistry I	9:00 M. W. F.	4
Laboratory	2:00 T. Th.	
Home economics I	10:00 M. and F.	4
Laboratory	10:00-12:00 T. Th.	
History 19	11:00 M. W. F.	3
Home economics 41	2:00 M. F.	2
		16

Electives: English 26 and 27.

Freshman Year—Second Semester.

English 2	8:00 M. W. F.	3
Chemistry 2	9:00 M. W. F.	4
Laboratory	2:00 T. Th.	
Home economics 2	10:00 M. F.	4
Laboratory	10:00-12:00 T. Th.	
History 29	11:00 M. W. F.	3
Home economics 42	2:00 M. F.	2
		16

Sophomore Year—First Semester.

Botany I	8:00 M. F.	4
Laboratory	2:00 M. F.	
English 26	8:00 T. Th.	2
Home economics 11	9:00 T. Th.	4
Laboratory	10:00-12:00 T. Th.	
Education 17	10:00 M. W. F.	3
Elective		3
		16

Sophomore Year—Second Semester.

Botany 2	8:00 T. Th.	4
Laboratory	2:00 W. and 9:00 S.	
English 27	8:00 T. Th.	2
Home economics 14	2:00-5:00 M. F.	4
Education 12	10:00 M. W. F.	3
Elective		3
		16

Electives: Home economics 41 and 42; Hygiene and sanitation 9; Home economics 9; Hort. 3, Poultry 1, Dairy husbandry 21. Zoology may be substituted for Botany 1 or 2 if necessary to meet requirements.

Junior Year—First Semester.

	Hrs.		
		9:00 T. Th.	3
Chemistry 16		2:00 W.	
Laboratory		10:00 T. Th.	4
Home economics 24		2:00 T. Th.	
Laboratory		2:00-5:00 M. F.	3
Home economics 12			6
Elective			
			16

Junior Year—Second Semester.

Home economics 9	8:00 T. Th.	2
Botany 10	11:00 T. Th.	3
Laboratory	2:00 W.	
Home economics 25	10:00 T. Th.	4
Laboratory	2:00 T. Th.	
Home economics 44	2:00 M. F.	3
Elective		4
		16

Electives: Home economics 20, Sociology 1, 9, Education 4, 5, if necessary to meet requirements. Substitution may be made for Chemistry 16 and Home economics 25 if necessary.

Senior Year—First Semester.

Sociology I	10:00 M. W. F.	3
Home economics 51	11:00 T. Th.	2
Home economics 17	2:00 T. Th.	3
Elective		8
		16

Senior Year—Second Semester.

Home economics 52	10:00 M. F.	2
Sociology 9	9:00 T. Th.	2
Elective		12
		16

Electives: Education 10 and 22; Home economics 26 and 27 and 20, Horticulture 3, Poultry 1, Dairy husbandry 21, if necessary to meet the requirements. Substitution may be made for Home Economics 17 if necessary.

COURSES IN HOME ECONOMICS.

Professor COLWELL, Assistant Professor BRECK, Miss MACLAY, Miss MILNER, Miss CHAMBERS and Miss RUTLEDGE.

(1) Students in the College of Arts and Sciences who select home economics as their major are required to take Courses 1 and 2, 24, in the food group, Courses 9 and 14 in the house and family group, and Courses 41, 42, 11, 12, and 44 in the clothing and textile group. Students who are preparing to teach home economics must also take Courses 26 and 27.

(2) Science requirements: Chemistry 1 and 2 and Botany 1 and 2, or Zoology 1 and 2, are prerequisites or parallel for all courses in home economics except certain courses listed below. Chemistry 16 and Botany 10 are prerequisite or parallel courses for most of the advanced courses in home economics.

(3) Students who do not wish to take the sciences required may elect the following courses: 41, 42, 11, 14.

(4) Attention is called to the fact that students who take the B. S. H. E. degree are required to take in addition to home economics courses required for the A.B. degree, Courses 17, 25, 51 and 52.

(5) Students who wish to take the advanced work in home economics are expected to have repeated in the home, until skill has been required, the problems given in the elementary courses.

Foods.

1. **Selection and Preparation of Food.** (4 Hrs.) It is recommended that Chemistry 1 and 2 precede or parallel this course.

First semester; M. F., 10:00; laboratory sections (limited to 20 students each), for students in the College of Agriculture; T. Th., 10:00-12:00; other sections M. F., 2:00-4:00; Miss MILNER, 208, 212, O.

2. **Selection and Preparation of Food.** (4 Hrs.) Continuation of Course 1. Prerequisite: Same as in Course 1.

Second semester; M. F., 10:00; laboratory sections (limited to 20 students each), for students in the College of Agriculture; T. Th., 10:00-12:00; other sections M. F., 2:00-4:00; Miss MILNER, 208, 212, O. H.

1a. **Selection and Preparation of Food.** (4 Hrs.) Similar to course 1. For students who offer one unit of cooking for entrance.

First semester; T. Th., 9:00; laboratory sections, M. and F., 2:00; Miss MACLAY, 208 and 112. O. H.

2a. **Selection and Preparation of Food.** (4 Hrs.) Similar to course 2. For students who offer one unit of cooking for entrance.

Second semester; T. Th., 9:00; laboratory sections, M., and W., 2:00; Miss MACLAY, 208 and 112, O.

20. **Experimental Cookery.** ..(2 Hrs.) Prerequisite or parallel, Home economics 24, 25.

First or second semester; M. F., 2:00-5:00; Miss MACLAY.

22. **Demonstrations.** (2 Hrs.) Prerequisite: Home economics 1 and 2.

First semester; T. Th., 4:00; Professor COLWELL.

23. **Demonstrations.** (2 Hrs.) Continuation of course 22. Prerequisite: Home economics 1 and 2.

Second semester; T. Th., 4:00; Professor COLWELL.

24. **Elementary Dietetics.** (4 Hrs.) Prerequisite: Home economics 1 and 2. Parallel course. Chemistry 16.

First semester; T. Th., 10:00; laboratory sections, T. Th., 2:00; M. F., 2:00; Professor COLWELL and Miss MACLAY.

25. **Dietetics.** (4 Hrs.) Prerequisite: Chemistry 16, Home economics 1, 2, 24.

Second semester; T. Th., 10:00; laboratory section, T. Th., 2:00; Professor COLWELL and Miss MACLAY, 208, O. H.

Textiles and Clothing.

11. **Applied Design.** (4 Hrs.)

First semester; T. Th., 9:00; laboratory T. Th., 10:00-12:00; W., 2:00-5:00; Saturday, 9:00-12:00; Miss CHAMBERS, 212 O. H.

Second semester; T. Th., Miss CHAMBERS, 212 O. H.

12. **Textiles.** (3 Hrs.)

First semester; M. F., 2:00-5:00; T. Th., 2:00-5:00; Miss CHAMBERS, 110, O. H.

41. **Elementary Course in Clothing.** (2 Hrs.)

First or second semester; laboratory sections, M. and F., 2:00-5:00; T. and Th., 2:00-5:00; T. Th., 10:00-12:00; W., 2:00-4:00; S. 9:00-11:00; Miss RUTLEDGE and assistants.

42. **Elementary Course in Clothing.** (2 Hrs.) A continuation of course 41.

First or second semester; laboratory sections, M. and F., 2:00-5:00; T. and Th., 2:00-5:00; T. Th., 10:00-12:00; W., 2:00-4:00; S., 9:00-11:00; Miss RUTLEDGE and assistants.

44. **Selection and Construction of Clothing.** (3 Hrs.) Prerequisite: Home economics 14, 42, 11, 12.

Second semester; laboratory sections, M. F., 2:00-5:00; T. Th., 2:00-5:00; Miss RUTLEDGE, 210, O. H.

17. Selection and Construction of Clothing. (3 Hrs.) A continuation of 44. Prerequisite: 41, 42, 44, 11, 12.

First semester; T. Th., 2:00-5:00; Miss RUTLEDGE, 213, O. H.

The House and the Family.

9. Hygiene of the Family Group. (2 Hrs.) Prerequisite: Hygiene and Sanitation 9.

Second semester; T. Th., 8:00.

14. Home Planning and Furnishing. (4 Hrs.) Prerequisite: 11.

Second semester; T. Th., 9:00-12:00; W., 2:00-5:00; S., 9:00-12:00; Miss CHAMBERS, 212, O. H.

51. Housewifery. (2 Hrs.) Prerequisite: All required courses in home economics for vocational home economics.

First semester; T. Th., 11:00; Miss RUTLEDGE, 208, O. H.

52. Home Management. (2 Hrs.) Prerequisite: All required courses in home economics for vocational home economics.

Second semester; M. F., 10:00; Professor COLWELL.

50. Demonstration Home. (3 Hrs.)

First or second semester.

Teachers' Courses.

26. Home Economics in Public Schools. (2 Hrs.) Open only to seniors. Parallel courses, Education 10 and 22. Prerequisite: All required home economics courses.

First semester; M. F., 8:00; Assistant Professor BRECK.

27. Teachers' Course in Home Economics. (2 Hrs.) Prerequisite: Home economics 26. Parallel education 22, if not previously taken.

Second semester; M. W. F., 9:00; Assistant Professor BRECK.

8. Special Problems. (1 to 4 Hrs.) Open to juniors and seniors. Thesis course. Lectures, conferences, laboratory work. Prerequisite: All elementary courses in home economics, Chemistry 1 and 2 Botany 1 and 2 or Zoology 1 and 2.

First and second semester; hours to be arranged; Professor COLWELL and assistants.

THE FARMERS' WEEK.

The Farmers' Week is a week (usually the first week in January) set aside by the College of Agriculture and the West Virginia Federation of Farm Bureaus as a time when the delegations of farmers and farm women from the various counties and the officials of the college meet and confer relative to the rural work done and to be done in West Virginia.

The program consists of lectures and demonstrations on general agricultural subjects by members of the faculty and out of state experts. This instructional work is given each forenoon. In the afternoon the program is in charge of the West Virginia Federation of Farm Bureaus and is in the nature of conferences relative to various state problems confronting the rural people. The evening program usually consists of a musical program and a lecture by someone with a national reputation on some subject relating to rural life.

The week is open to everyone and no fees are charged.

Immediately following Farmers' Week the Extension Division carries on a series of extension schools. These schools are open to all. There are no fees or entrance requirements. They are espcially planned for the farmers and farm boys who want to get some good practical training in agriculture but cannot arrange to attend high school or college.

Special lectures will be given each week by some of the most successful farmers in the state.

In addition to the Farmers' Week, the State 4-H Camp (Prize Winners' Course) for the members of the boys' and girls' clubs is held at the University in June. A special program for these young people is provided which program is so planned as to aid in their 4-H development—Head (mental), Heart (religious), Health (physical), and Hand (social).

Further information relative to the Farmers' Week, the Extension Schools and the work of the Extension Division may be obtained upon application to the Director Agricultural Extension, Morgantown.

THE COLLEGE OF LAW

THE FACULTY.

FRANK BUTLER TROTTER, A.M., LL.D., *President of the University*

JOSEPH WARREN MADDEN, A.B., J.D., *Dean and Professor of Law*

WILLIAM PATRICK WILLEY, A.M., *Professor of Law, Emeritus*

JAMES RUSSELL TROTTER, PH.D., LL.B., *Professor of Law*

THOMAS PORTER HARDMAN, M.A., LL.B., J.D., *Professor of Law*

LEO CARLIN, A.B., LL.B., *Professor of Law*

EDMUND CHARLES DICKINSON, A.B., J.D., *Professor of Law*

CLIFFORD RAYMOND SNIDER, A.B., LL.B., S.J.D., *Associate Professor of Law*

WILBUR JONES KAY, A.M., *Professor of Public Speaking*

JUDGES OF THE PRACTICE COURT AND SPECIAL LECTURERS ON PRACTICE FOR 1921-1922.

JOHN T. GRAHAM, *Judge of Sixth Judicial Circuit*

JOHN C. McWHORTER, *Former Judge of Twelfth Judicial Circuit*

HAYMOND MAXWELL, *Judge of Fifteenth Judicial Circuit*

ISAAC GRANT LAZELLE, *Judge of Twenty-third Judicial Circuit*

HELEN SARAH MOYLAN, A.B., *Secretary and Librarian*

LOUIS ALAN McKEE, *Library Assistant*

LAMBERT McCHESNEY DOOLITTLE, *Library Assistant*

BENJAMIN GARNETT REEDER, A.B., *Library Assistant*

HISTORY AND PURPOSE.

The College of Law was established in 1878 and is the oldest professional school in the University. It is the only law school in the state of West Virginia. A large proportion of the bench and bar of West Virginia have been enrolled among its students.

Its course of instruction for the degree of Bachelor of Laws, originally requiring but one and later two years of law study, was, in 1912, fixed at three years. In 1913 a requirement of one year of college work for admission was added. In September 1924, ae requirement of two years of college work for admission will become effective.

In 1914 the College of Law was admitted to membership in the Association of American Law Schools, which is an organization of the leading law schools of the United States for the purpose of establishing and maintaining high standards of legal education.

The purpose of the instruction given in the College of Law is to train the student thoroughly in the principles and procedure of the common law with particular reference to their application or modification by decision and statute in West Virginia.

NEW LAW BUILDING.

Plans have been approved and the contract has been entered into by the State Board of Control for the construction of a new building for the exclusive use of the College of Law. The building will be of fireproof construction, one hundred and forty-four feet in length, fifty-six feet in minimum width, and three stories in height. It will contain three class-rooms, a fully-equipped practice court room, study-rooms with space for one hundred fifty readers, private offices for members of the faculty, the dean, the librarian and the secretary, a Law Quarterly room, club rooms for both men and women students, locker rooms with a capacity of two hundred and fifty, a clerk and sheriff's office, and stack and shelf space for sixty thousand volume... The new building will be completed by June 1, 1923.

LAW LIBRARY.

The Law Library numbers about 15,000 volumes. It contains the reports of the highest courts of all the States, the insular possessions, and the District of Columbia, either complete or to the National Reporter System (including several sets of Virginia and West Virginia reports), most of the published reports of the lower courts of the various States, the complete National Reporter System, the complete reports of the Federal courts, the various sets of annotated selected cases, the various American and English encyclopedias of law, the complete general digest system of the West Publishing Company, a collection of English reports containing the English Reprint and the Law Reports, the most important Canadian Reports, complete sets of leading English and American legal periodicals, over 1,000 volumes of treatises, over 800 volumes of state and federal statutes, including the latest codes, compilations and acts of the United States and of all the states together with a complete collection of the various codes and acts of Virginia and West Virginia, complete sets of the English Statutes, and over 500 volumes of briefs and records of cases decided by the Supreme Court of Appeals of West Virginia.

ENTRANCE REQUIREMENTS.

CANDIDACY FOR THE DEGREE OF BACHELOR OF LAWS.

The following persons will be admitted to the College of Law as candidates for the degree of Bachelor of Laws:

1. Graduates of colleges of approved standing.

2. Those having credit: (a) for fifteen units preparatory work (see below), and (b) for not less than 32 hours of work of collegiate grade in an institution of approved standing, which must include six hours of English (English 1 and 2 or equivalent), three hours of economics, and six hours of history. Persons having credit for all preparatory entrance requirements and twenty-nine of the thirty-two required hours may be granted admission to the first year class, conditioned upon the removal of such deficiency before the opening of following year.[1]

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[1]Beginning September 1, 1924, the following requirements will become effective, instead of those specified in paragraph 2 above:

Those having credit: (a) for fifteen units preparatory work (see below), and (b) for not less than sixty-four hours of work of collegiate grade in an institution of approved standing, which must include ten hours of English (English 1, 2, 26 and 27, or equivalent), six hours of economics and six hours of history. Persons having credit for all preparatory entrance requirements and sixty of the sixty-four hours may be granted admission to the first year class conditioned upon the removal of such deficiency before the opening of the following year.

To satisfy the fifteen units of secondary school work (work of a standard four-year high school), the following groups are required:

(1) Four units of English.

(2) Three units in any other subject.

(3) Two units in a third subject.

(4) Two units in a fourth subject.

(5) Four units elective.

Two units of Latin must be offered. These two units will satisfy one of the two-unit group requirements.

Work in the following subjects not to exceed the number of units placed after each subject will be accepted.

English	4 units	Science[3]	
		Physics	1 unit
Foreign languages[2]		Chemistry	1 unit
Latin	4 units	Biology	1 unit
Greek	3 units	Botany	1 unit
French	3 units	Geology	1 unit
German	3 units	Zoology	1 unit
Spanish	2 units	General science	1 unit
Italian	2 units	Physical geography	1 unit
		Physiology	1 unit
		Hygiene and sanitation	1 unit
Mathematics			
Algebra	1½ units	Vocational subjects (not to exceed	
Plane geometry	1 unit	four units in all.)	
Solid geometry	½ unit	Agriculture	3 units
Trigonometry	½ unit	Household arts	3 units
		Manual training	3 units
History and economics		Bookkeeping or book-	
History	3 units	keeping and commer-	
Civics	1 unit	cial arithmetic	2 units
Elementary economics		Shorthand and type-	
and sociology	1 unit	writing	2 units
		Commercial geography	½ unit
Education	2 units	Commercial law	½ unit
Drawing		Music:—violin, organ or	
Free-hand drawing	1 unit	piano[4]	2 units
Mechanical drawing	1 unit		

[2]Not less than two units of one foreign language will be accepted for entrance.

[3]A group of two units in science may be made by combining one unit each of physics and chemistry or one unit each of any two of the following: biology, botany, zoology, geology. A group of three units in science may be made by combining one unit each of any three of the following: physics, chemistry, biology, botany, zoology, geology.

[4]For conditions governing credit for music see page 59 of the General Announcements.

PRE-LEGAL COURSES IN COLLEGE OF ARTS AND SCIENCES.

Students are urged to complete at least three years of work in the College of Arts and Sciences before entering the College of Law, thus placing themselves in position to take advantage of the combined six-year course which leads to both arts and law degrees. Thorough work of collegiate quality in American constitutional and English constitutional history, economics, and English is particularly essential.

Students who offer only one year (32 hours), after Sept. 1, 1924, two years (64 hours), of college credit for admission are required to have completed the following courses: English 1 (3 hrs.), English 2 (3 hrs.), Economics 1 (3 hrs.). The student must also have completed six hours of history which should include History 17 (or 18) and History 22. Students coming from other colleges must present equivalent courses. In satisfaction of the remaining 17 hours, which are elective, the following are recommended as best suited to pre-legal students: History 23 (3 hrs.), History 18 (3 hrs.), Economics 2 (3 hrs.), English 26 (2 hrs.), English 27 (2 hrs.), and one or two courses in public speaking.

Students who enter the law school after September 1, 1924, must present at least two years of college credit (see footnote on page 7); such credit must include the following courses: English 1 (3 hrs.), English 2 (3 hrs.), English 26 (2 hrs.), English 27 (2 hrs.), Economics 1 (3 hrs.), Economics 2 (3 hrs.). A student must also have completed six hours of history which should include History 17 (or 18), and History 22. Students coming from other colleges must present equivalent courses. In satisfaction of the remaining 42 hours, which are elective, the following are recommended as well suited to pre-legal students: An advanced course in composition and rhetoric (preferably English 4), History 20 (2 hrs.), History 23 (3 hrs.), History 18 (3 hrs.), History 35 (2 hrs.), History 37 (1 hr.), or 40 (3 hrs.), Public Speaking 14 (2 hrs.) and 15 (2 hrs.) Economics 5 (3 hrs.). Economics 6 (4 hrs.), Economics 11 (3 hrs.), Sociology 1 (3 hrs.), Engineering 100 (3 hrs.), and Mathematics 22 (3 hrs.), 23 (3 hrs.), 24 (2 hrs.), and 25 (3 hrs.).

Students who do not offer two years of Latin for entrance to the freshmen class in the College of Arts and Sciences must satisfy this requirement during the period of pre-legal study.

SPECIAL STUDENTS.

In rare instances persons who cannot qualify as candidates for the degree of bachelor of laws may be admitted as special students on petition to the Committee on Entrance, approved by the faculty of the College of Law. The applicant must show that he is more

than 22 years of age, that he is unable to pursue such studies as will qualify him for admission as a regular student, that he possesses such educational training and practical experience as should enable him to pursue the study of law satisfactorily, and that he has satisfied the academic requirements specified by the order of the Supreme Court of Appeals, passed May 6, 1915, as preliminary to law study for all persons seeking admission to the bar in West Virginia. (See page 12). Permission to enter as a special student will be granted only in exceptional cases and will be subject to termination for unsatisfactory scholarship or conduct.

Special students may be admitted to the West Virginia bar only after having passed the state bar examination.

STUDENTS IN OTHER COLLEGES.

Students of at least junior standing in other colleges of the University may be permitted to take work in the College of Law subject to the regulations of the College where they are registered and of the College of Law, but conditioned in each case upon the consent of the instructor giving the course which such student desires to take.

ADMISSION TO COMBINED COURSE.

A student may secure the degree of Bachelor of Arts and Bachelor of Laws in six years under the following regulation of the College of Arts and Sciences.

Any candidate for the A. B. degree, who, at the end of the junior year has completed 96 semester hours and who has satisfied all other requirements of the College of Arts and Sciences for this degree, may in his senior year take the full first year of the law course, and upon completion of the same shall be entitled to receive the degree of Bachlor of Arts. But if a student has to his credit 92 semester hours at the end of his junior year, he may, subject to the approval of the dean of the College of Arts and Sciences and the dean of the College of Law, be allowed to enter upon the first year of the work of the law course, in which case the degrees shall be withheld until he attains four additional credit hours. Such cases, however, shall be treated as exceptions and the student is urged to complete the entire 96 hours of required work in the College of Arts and Sciences before beginning the study of law. No student may substitute the first year of law as above provided, who shall have failed to maintain a uniform record of good scholarship to the end of his junior year in the College of Arts and Sciences.

No work included in the above 96 credits and counted toward the A.B. degree may be again counted toward the LL.B. degree.

ADMISSION TO ADVANCED STANDING.

Applicants for admission to advanced standing must satisfy the following requirements:

1. Compliance with the requirements for admission to the first year class.

2. For admission to the second year class, applicants must have successfully pursued the study of law in residence for at least one year in an approved law school, where they have received credit for courses equivalent to those required for admission to the second year class in the College of Law.

3. For admission to the third year class, applicants must have successfully pursued the study of law in residence for at least two years in an approved law school where they have received credit for courses equivalent to those required for admission to the third year class in the College of Law.

No credit will be given for work done in a law office.

No student may receive the degree of Bachelor of Laws without at least one year's residence in the University and the successful passing of courses aggregating twenty-eight semester hours pursued in the College of Law.

Any applicant for advanced standing may also, in the discretion of the law faculty, be required to undergo an examination in any or all of the subjects presented for advanced standing.

REQUIREMENTS FOR DEGREES.

BACHELOR OF LAWS.

Students who have satisfied the preparatory and college requirements for entrance to the College of Law as candidates for the degree of bachelor of laws, and who have satisfactorily completed courses aggregating eighty-six hours, distributed over three years residence and who have otherwise satisfied the requirements of the University and of the College of Law, will be granted the degree of Bachelor of Laws.

The eighty-six hours offered by a student for the degree of bachelor of laws must include the following courses: Contracts, Personal property, Agency, Torts, Actions, Common law pleading, Criminal law and procedure, Persons and domestic relations, Real property I, Real property II, Evidence, Equity jurisdiction I, Practice and procedure, and Practice court.

Students who take military science after enrolling in the College of Law will be permitted to substitute two hours' credit in military science for two hours of law.

ADMISSION TO THE BAR.

Under the provisions of ch. 119, sec. 1, of the West Virginia Code, those who receive the degree of bachelor of laws from the West Virginia University may be admitted to the bar without further examination.

Bar Examinations.

All persons seeking admission to the West Virginia bar, except those who hold the degree of bachelor of laws from West Virginia University, are required to take and pass the state bar examination.

The bar examinations are held at Charleston, commencing on the second Wednesday of March and of September.

An order of the Supreme Court of Appeals entered May 6, 1915, provides that persons applying for license to practice law in West Virginia must satisfy the following requirements as to period of study and degree of preparation:

"(a) A preliminary academic education equivalent to that required for graduation from a high school of the first class in West Virginia, which may be evidenced by a diploma of graduation from such a high school or by a certificate showing equivalent credits from any other school whose credits would be accepted for admission to West Virginia University or by passing an examination on equivalent subjects.

"(b) Three years of diligent law study as a student in the office of and under the direction of, a member of the bar of this State (or another state), or as a resident student in an approved law school, evidenced by a certificate to the State Board of Law Examiners by the attorney under whom, or the head of the law school at which, such study was pursued, showing in detail the work done. In interpreting the above requirement, not less than ten months, exclusive of vacations, shall constitute one year of office study, and not less than eight months, exclusive of vacations, shall constitute one year of law school study."

Information as to bar examinations and as to other matters relating to admission to the bar may be obtained upon inquiry directed to the Secretary, State Board of Law Examiners, Charleston, W. Va.

WEST VIRGINIA LAW QUARTERLY.

The West Virginia Law Quarterly is published in November, January, April and June by the faculty of the College of Law. It is the official publication of the West Virginia Bar Association.

The editors of the Student Note and Recent Case Department of the Law Quarterly are members of the second and third year classes, who are chosen each year from those students who made the highest grades in the preceding year. This department affords to ambitious students an opportunity to do research work of a practical nature.

PRIZES.

Awards for prizes in the University are made in accordance with the following rules:

No composition, in whole or in part, shall be submitted in competition for two prizes.

Only students pursuing courses leading to baccalaureate degrees are eligible for any prize offered, except for the James F. Brown prize.

No student shall be eligible to enter any contest who has not been a resident student in this University for at least one semester preceding the semester in which the contest is to be held, and who, unless he be a competitor for the James F. Brown prize, is not a resident student in good standing in the University in the semester in which the contest is held.

No successful contestant may become for a second time a competitor for the same prize.

If in any contest the judges find no manuscript of sufficient merit, there shall be no award of the prize for that year.

Students intending to compete in any essay-writing contest must notify the chairman of the Committee on Prizes not later than March 15. Three typewritten copies of each essay must be in the hands of the chairman of the committee not later than May 15.

The conditions upon which the awards in the several contests are made may be learned upon application to the President's office, or to the members of the Committee on Prizes.

The following University prizes are of peculiar interest to law students:

The Bryan Prize in Political Science.

The Hon. William J. Bryan has given a sum of money, the income of which is offered as a prize for the best essay on some subject in the science of government. The amount of this prize is $15.00.

The Tax Commission Prize.

The members of the State Tax Commission of 1902, W. P. Hubbard, Henry G. Davis, John K. Thompson, L. J. Williams and J. H. Holt, have given the sum of $1,350, the income of which is to be used annually as a prize for the "best original work bearing on matters of taxation in West Virginia." The conditions of competition are determined by the Council of Administration. The amount of the prize at present is $70.00.

The James F. Brown Prize.

In 1919 the late Mr. James F. Brown, of the Class of 1873, gave $5,000.00 to the University, the proceeds to be invested by it and the income used as a prize for the best essay each year on a subject concerning the privileges and immunities of citizens guaranteed by the federal or state constitutions. The subject for the year 1922-23 will be as follows: "The Constitutional Rights of One Accused of Crime

Students in the senior class and within one year after graduation are eligible to compete.

UNIVERSITY FEES AND EXPENSES.

Students in the College of Law are charged:

A tuition fee of $25.00 a semester if residents of West Virginia, and $5$0.00 a semester if non-residents.

A contingent fee of $12.50 a semester.

A student activity fee of $5.00 a semester.

A medical fee of $2.50 a semester.

A diploma fee of $10.00, payable at the beginning of the semester in which the student expects to receive his degree.

A fee of $2.00 each semester is charged for registration and the issuance of class cards. This fee is remitted to all students who procure class cards during the first three days of the first semester, and the first two days of the second semester.

Refunding of Tuition Fees.

Students who withdraw from the University for good and sufficient reasons during the first two weeks of the semester, will have their fees refunded upon making application to the President.

COST OF A YEAR'S WORK.

Board and lodging may be obtained in Morgantown for from $8.00 to $10.00 a week. Furnished rooms may be obtained at from $2.00 to $3.00 a week with two in a room. Board in private families or in students' boarding clubs costs from $6.00 to $7.00 a week. A student's washing will cost usually from $25.00 to $35.00 a year, his text-books from $10.00 to $35.00 a year, and his contingent and athletic fees $15.00 to $35.00 a year. To these fixed charges must also be added matriculation, tuition, diploma, and laboratory fees, in the case of students who are required to pay them. Traveling expenses, clothing, and miscellaneous expenses will depend largely upon the tastes and habits of the individual. In general it may be said that the legitimate cost of a nine months' term of residence at the University ranges from $450.00 to $600.00, exclusive of traveling expenses.

Text-books are kept for sale in the University book store. A book exchange is maintained by the College of Law where second-hand law books may be sold or bought without any commission being charged.

State cadets are furnished their stationery and text-books to the value of $10.00.

COURSES AND EXAMINATIONS.

COURSES.

All courses extend either throughout the entire year or through one semester. No credit will be given for less than an entire course except by special order of the law faculty. Grades given at the end of the first semester in courses extending throughout the year are merely indicative of the quality of work done by the student to that point and do not give credit for the part of the course so far pursued. Such first semester grade may be considered in determining the final grade. Any student who fails in the first semester's work in any such course will not be permitted to continue that course.

EXAMINATIONS.

Students are required to take all regular examinations. No student who absents himself from any such examination without being excused therefrom by the faculty of the College of Law, will receive credit unless he repeats the course successfully. If absence from a final examination is granted by the faculty, the student's grade in that course will be withheld until he has passed the next examination for the removal of conditions in the course. Application for leave to be absent from a regular examination must be made before the hour at which such examination closes.

Regular Examinations are held at the end of each semester in all courses. The period devoted to such examinations and the length of time of each examination are determined by the faculty of the College of Law.

Examinations for the Removal of Conditions are held during the seven days immediately following the day for mid-semester reports in the second semester and the seven days immediately following the opening of the University in the fall. No other special examinations are given.

GRADES.

Reports of students' grades are made at the end of each semester. If such grade be reported at the end of the course, it is the student's grade for the course; if at the end of the first semester in a course extending throughout the year, it is merely indicative of the quality of the student's work that far in the course.

In determining grades the instructor gives such weight as he deems best to examinations, daily recitations, and attendance. He may refuse examination to any student because of poor attendance. One per cent. is deducted by the Registrar from the grade reported

by the instructor for each unexcused absence in the course during the semester for which the grade is given.

The privilege of final examination is denied a student absent, for any cause, from 20% of the class periods of a course, or from 25% of the class periods of the last semester of a course running through the year. The privilege of mid-year examination is denied a student absent, for any cause, from 25% of the class periods of the first semester, in a course running through the year, and he will be requested to drop the course. The operation of this rule may be suspended by the law faculty in cases where substantially all of the absences were unavoidable, but in all such cases the time lost must be made up by attendance at an approved law school before the student will be recommended for a degree or before his attendance will be certified to another law school.

Students who fail in any course are given no credit for it.

A student who is conditioned in any course will receive no credit for it unless he pass the next examination for removal of conditions in that subject, provided, however, that the faculty may require a student to complete certain supplementary work in lieu of such examination or in addition thereto.

The law faculty may warn any student whose work is deemed unsatisfactory, place him on probation or refuse his re-registration in the College of Law.

METHOD OF INSTRUCTION.

The work of the students is based chiefly upon the study and discussion of decided cases, with collateral reading of statutes, approved text-books and periodicals, elucidated by free discussion in the class.

COURSES IN PRACTICE AND PROCEDURE.

Practice and Procedure. Instruction in practice and procedure is preparatory and supplementary to the work of the practice court, and is conducted by text-book, lectures and special study of the statutes and decisions governing West Virginia practice and procedure. Attention is given to the jurisdiction and functions of the Supreme Court of Appeals, the Circuit, County and inferior Courts, and the powers, duties, and liabilities of attorneys at law as officers of the court. Incidental consideration is also given to the canons of professional ethics adopted by the American Bar Association and the West Virginia Bar Association. The statutes and decisions governing the purpose and use of special legal and equitable remedies, such as attachment, garnishment, statutory motions, injunctions, etc., receive careful attention. Attention is also given to the procedural phases of the

extraordinary legal remedies, such as mandamus, habeas corpus, certiorari, quo warranto, prohibition, etc.

Practice Court. The practice court exercises original jurisdiction in law, equity, criminal, and probate cases, and appellate jurisdiction in appeals from inferior tribunals.

Every third-year student, before receiving the bachelor's degree is required to prepare the pleadings and prosecute to judgment the required number of cases in the practice court. The equivalent of at least five hours in each week during the second semester must be spent by each third-year student in participation in practice court work in the court room.

Statements of facts are furnished, such as would be related to a lawyer in active practice by his client. Each student must determine whether or not upon such facts the particular case in hand is one of common law, equity, criminal or probate cognizance. He must then frame his pleadings, serve his summons or notice and answer his adversary's pleadings until issue is joined in legal manner, after which the case is brought on for hearing in strict accordance with settled legal procedure, witnesses are examined and cross-examined, and the case is conducted through all the various stages of the trial or hearing down to and including the judgment, decree or sentence, after which should the case be appealed, it must be carried through the Supreme Court, involving the preparation of the record on appeal, briefs of counsel, etc.

The clerk and his assistant are chosen from the student body, from whose ranks are also drawn a sheriff, jurors, and other officials, thus giving to the students the benefits of practice in administrative judicial machinery. The sessions are presided over by that member of the law faculty who has charge of practice courses and by circuit judges especially chosen for the work.

Drafting of Legal Instruments. Students are instructed in this course in the actual preparation of deeds, mortgages, wills, abstracts and opinions of title, assignments, contracts, partnership agreements, and other legal instruments which a lawyer is called upon to prepare. Statements of facts are furnished to the class by the instructor in charge and each student is required to prepare the various forms of instruments. These are corrected by the instructor and are discussed and criticised in class. Careful consideration is given to special forms of execution and acknowledgement when one of the parties is a corporation, a partnership, a married woman, or the like.

COURSES OF INSTRUCTION.

The curriculum leading to the degree of Bachelor of Laws covers a period of three academic years. The work of the first year is prescribed. All of the studies of the second year are elective except Common Law Pleading, Evidence, Real property II, and Equity jurisdiction I, and all of the third year courses except Practice and procedure and Practice court. Second year courses may be elected by third year students, but third year courses will not in general be open to second year students. A few subjects that are given only in alternate years may be elected by both second and third year students. All required courses are marked by an asterisk.

It is expected that each student will carry fourteen hours of class room work per week during the first and second years and fifteen during the third year. Not less than thirteen nor more than sixteen hours may be carried without the special consent of the law faculty.

PROGRAM OF COURSES FOR 1922-23.[1]

FIRST YEAR.

***Actions.** (2 Hrs.) Two hours a week in the first semester. Sunderland, Cases on Common Law Pleading and required readings. Professor CARLIN.

***Agency** (Including Workmen's Compensation.) (4 Hrs.) Four hours a week in the second semester. Wambaugh, Cases on Agency. Professor HARDMAN.

***Contracts.** (6 Hrs.) Three hours a week throughout the year. Williston, Cases on Contracts. Professor DICKINSON.

***Criminal Law and Procedure.** (4 Hrs.) Four hours a week in the first semester. Mikell, Cases on Criminal Law and Criminal Procedure. Professor J. R. TROTTER.

***Personal Property.** (2 Hrs.) Two hours a week in the first semester. Bigelow, Cases on Property, vol. 1. Professor HARDMAN.

***Persons and Domestic Relations.** (2 Hrs.) Two hours a week in the second semester. Smith, Cases on Persons.
Professor J. R. TROTTER.

***Real Property I.** (2 Hrs.) Two hours a week in the second semester. Bigelow, Cases on Property, vol. 2.
Professor MADDEN.

***Torts.** (6 Hrs.) Three hours a week throughout the year. Ames and Smith, Cases on Torts, Pound's Edition. Professor DICKINSON.

[1]The program of courses as here given is subject to change.

SECOND YEAR.

*Common Law Pleading (Including Drafting of Pleadings). (4 Hrs.) Four hours a week in the second semester. Sunderland, Cases on Common Law Pleading. Professor CARLIN.

Damages. (2 Hrs.) Two hours a week in the second semester. Beale, Cases on Damages. (2d ed.) Given in 1922-23 and in alternate years thereafter. Professor J. R. TROTTER.

*Equity Jurisdiction I. (4 Hrs.) Two hours a week throughout the year Ames, Cases on Equity Jurisdiction, vol 1 . Associate Professor SNIDER.

*Evidence. (5 Hrs.) Five hours a week in the first semester. Thayer, Cases on Evidence. (2d. ed.) Professor HARDMAN.

[Insurance. (2 Hrs.) Two hours a week in the second semester. Wambaugh, Cases on Insurance. Omitted in 1922-23 and in alternate years thereafter. Professor ————]

Negotiable Instruments. (3 Hrs.) Three hours a week in the first semester. Smith and Moore, Cases on Bills and Notes. Professor DICKINSON.

*Real Property II. (4 Hrs.) Two hours a week throughout the year. Aigler's Cases on Property and Bigelow's Cases on Rights in Land. Professor MADDEN.

Sales of Personal Property. (3 Hrs.) Three hours a week in the second semester. Woodward, Cases on Sales. Professor J. R. TROTTER.

Trusts. (4 Hrs.) Four hours a week in the first semester. Scott, Cases on Trusts. Professor MADDEN.

[Wills and Administration. (3 Hrs.) Three hours a week in the second semester. Warren, Cases on Wills and Administration. Omitted in 1922-23 and in alternate years thereafter. Professor J. R. TROTTER.]

THIRD YEAR.

[**Bankruptcy.** (2 Hrs.) Two hours a week in the first semester. Williston, Cases on Bankruptcy. (2d ed.) Omitted in 1922-23 and in alternate years thereafter. Professor HARDMAN.]

Conflict of Laws. (4 Hrs.) Four hours a week in the second semester. Beale, Cases on Conflict of Laws, (shorter selection.) Associate Professor SNIDER.

Constitutional Law. (4 Hrs.) Four hours a week in the first semester. Wambaugh, Cases on Constitutional Law. Associate Professor SNIDER.

Drafting of Legal Instruments. (1 Hr.) One hour a week in the second semester. See page 17 for information as to the work in this course. Professor CARLIN.

Equity Jurisdiction II. (2 Hrs.) Two hours a week in the second semester. Ames, Cases on Equity Jurisdiction, vols. 1 and 2 (parts). Given in 1922-23 and alternate years thereafter. Associate Professor SNIDER.

Equity Pleading and Practice. (2 Hrs.) Two hours a week for the first semester. Selected cases. Given in 1922-23. Professor CARLIN.

Legal Ethics. (1 Hr.) One hour a week in the second semester. Lectures and Assigned Readings. Given in 1922-23 and alternate years thereafter.

[**Mining Law.** (2 Hrs.) Two hours a week in the second semester. Selected cases on rights in coal, oil and gas. Omitted in 1922-23 and alternate years thereafter. Professor MADDEN.]

Municipal Corporations. (2 Hrs.) Two hours a week in the first semester. Beale, Cases on Municipal Corporations. Given in 1922-23 and in alternate years thereafter. Professor HARDMAN.

Partnership. (4 Hrs.) Four hours a week in the second semester. Gilmore, Cases on Partnership. Given in 1922-23 and in alternate years thereafter. Professor J. R. TROTTER.

Practice and Procedure. (4 Hrs.) Four hours a week in the first semester. Munson, Elementary Practice, selected cases, statutes and lectures. See page 16 for information as to work in this course. Professor CARLIN.

Practice Court. (3 Hrs.) Court sessions and lecture periods in the second semester as specified by the faculty. See page 17 for information as to work of the practice court. Professor CARLIN and circuit judges.

Private Corporations. (4 Hrs.) Four hours a week in the first semester. Warren, Cases on Private Corporations. (2d. ed.) Professor J. R. TROTTER.

Public Speaking 14. Argumentation and Debate. (2 Hrs.) Two hours a week both in the first and in the second semester. See University catalogue, for information as to work in this course. Professor KAY.

Public Speaking 15. Advanced Argumentation and Debate. (2 Hrs.) Two hours a week in the second semester. See University catalogue for information as to work in this course. Professor KAY.

Public Utilities. (4 Hrs.) Four hours a week in the second semester. Wyman, Cases on Public Service Companies and Frankfurter, Cases Under Interstate Commerce Act. Professor HARDMAN.

[**Quasi-Contracts.** (2 Hrs.) Two hours a week for the second semester. Casebook to be selected. Omitted in 1922-23 and in alternate years thereafter. Professor DICKINSON.]

Real Property III. (4 Hrs.) Four hours a week in the second semester. Kales, Cases on Future Interests. Given in 1922-23 and in alternate years thereafter. Professor MADDEN.

Suretyship. (2 Hrs.) Two hours a week in the second semester. Ames, Cases on Suretyship. [Omitted in 1922-23 and in alternate years thereafter. Associate Professor ————]

THE SCHOOL OF MEDICINE

THE FACULTY.

FRANK BUTLER TROTTER, A.M., LL.D., *President of the University*

JOHN N. SIMPSON, A.B., M.D., *Dean and Professor of Medicine*

AARON ARKIN, M. D., PH.D., *Professor of Pathology and Bacteriology*

SAMUEL JOHN MORRIS, M.D., *Professor of Anatomy*

WITHROW MORSE, PH.D., *Professor of Physiological Chemistry*

MARTIN LOXLEY BONAR, M.S., M.D., *Professor of Pharmacology*

EDWARD JERALD VAN LIERE, B.A., M.S., M.D., *Professor of Physiology*

IRVIN HARDY, M.S., M.D., *Professor of the Principles and Practice of Medicine*

GORDON ALGER BERGY, B.S., M.S., *Associate Professor of Pharmacy*

GIDEON STANHOPE DODDS, PH.D., *Associate Professor of Histology and Embryology*

ROBERT SPAULDING SPRAY, M.S., *Associate Professor of Bacteriology*

CHARLES ROYAL KESSEL, B.S., M.D., *Associate Professor of Pharmacology and Physiology*

CHARLES McCHESNEY BRAY, A.M., M.D., *Instructor in Physical Diagnosis*

ELMER L. HAMMOND, PH.C., B.S.PHARM. *Instructor in Pharmacy*

JOSEPH LESTER HAYMAN, B. S., PH.C., *Instructor in Pharmacy*

CLARENCE LAWRENCE BEERS, PH.C., *Assistant in Pharmacology*

PERRY MASON SCOTT, B.S., *Assistant in Pathology and Bacteriology*

RAY HUNTER WHARTON, B. S., *Assistant in Anatomy and Histology*

RAY IRA FRAME, B. S., *Assistant in Physiology and Physiological Chemistry*

INSTRUCTION IN MEDICINE.

Regular instruction in subjects preparatory to the study of medicine was first given in West Virginia University in 1871, the "chair of anatomy, physiology, and hygiene," having been established in that year. A curriculum covering the first two years of a standard four years' medical course was provided in 1902 and the work was placed in charge of the College of Medicine with a resident faculty of six men. In 1912 the College of Medicine became the School of Medicine. In reorganizing the work in medicine the Board of Regents retained the general character of the curriculum previously offered but provided for a larger faculty, more laboratories and more adequate equipment.

As at present constituted the West Virginia University School of Medicine has its own dean and faculty but confers no degrees in medicine. It is not affiliated with any other college or school of medicine and its students may go where they like to complete their medical studies and receive the degree of M.D.

The work in physical diagnosis and in minor surgery is in charge of practicing physicians, members of the local medical profession.

THE MEDICAL BUILDING.

A three-story brick building furnishes room for the classes in medicine.

On the first floor are found the offices of the dean, the dispensary, the offices of the professors of pharmacology and physiology, the pharmacological and physiological laboratories and a general lecture room. On the second floor are the laboratories of bacteriology and pathology and two laboratories for physiological chemistry. On the third floor is a large laboratory for gross anatomy, one for histology, and one large lecture room. Each laboratory is provided with an abundance of light. There is an incinerating plant for the disposal of refuse.

A suitable building, conveniently located near the School of Medicine is provided for the housing of animals used in experimental work. A well lighted room on the upper floor is used exclusively for operative surgery.

DISPENSARY AND STUDENT HEALTH SERVICE.

A dispensary open to the city poor is conducted by the physicians of the medical faculty. Free service is rendered. The treating of patients is done by the faculty but students of the second year class are instructed in the proper methods of examining and diagnosing disease. This work supplements the courses in physical diagnosis and minor surgery.

In return for the medical fee paid by all students free service is rendered to students by the faculty and drugs are supplied free from the pharmaceutical dispensary.

LABORATORIES.

ANATOMICAL LABORATORY.

The anatomical laboratory is equipped with a Balopticon for doing projective work, a complete set of imported models of the brain and nervous system, eye, ear, thoracic and abdominal viscera, joints and muscles. There are frozen sections of the body for use in the study of regional anatomy. Each student in gross anatomy has the use of a complete skeleton and each student in histology is provided with a microscope.

LABORATORY OF HISTOLOGY AND EMBRYOLOGY.

The laboratory of histology and embryology has a modern equipment of microscopes and provides microscope illumination with daylight glass for dark days. Each student is assigned a loan set of slides covering the subject matter of the course. The laboratory has also a collection of models of embryos and certain histological structures. A micro-projection apparatus is available. The preparation room is equipped with the necessary apparatus and reagents for making microscopic preparations.

PATHOLOGICAL LABORATORY.

The pathological laboratory is equipped with all necessary apparatus for general and special work, including parafine and celloidin microtomes, freezing microtomes, paraffine ovens, microscopes with oil immersion lenses, all necessary stains and chemicals. There is also a projection apparatus with microscope attachment for demonstration purposes. The department possesses a large collection of mounted microscopic sections representing all the pathological processes, and a museum of gross specimens. Surgical material is obtained from the city hospital.

LABORATORY OF MEDICAL BACTERIOLOGY.

The bacteriological laboratory is equipped with all necessary apparatus, such as sterilizers, incubators, glassware, etc. Each student has the use of a microscope with oil immersion lens. Special apparatus for bacteriological examination of air, water, milk, and blood is supplied to each student. Material for laboratory work in bacteriological diagnosis, such as Widal tests for typhoid, examination of sputum for tubercle baccilli, bacteriological examination of water, etc., is available.

PHYSIOLOGICAL AND CHEMICAL LABORATORIES.

The laboratory devoted to the work in physiology is supplied with tables, each accommodating two students who work together. Each table has a complete set of Harvard physiological apparatus which is lent to the student with a charge of breakage only. There are for general use kymographs, apparatus for work in blood pressure and blood counting, hemaglobinometers, charts and models.

The physiological chemistry laboratory is large and well-equipped. There is a stock room and a laboratory for research in connection with it.

PHARMACOLOGICAL LABORATORY.

The pharmacological laboratory is equipped with chemical desks, operating tables, and electrical kymograph and respiration apparatus for taking continuous records of respiration and blood pressure. Special animal cages are provided to meet the needs of courses 1 and 2, In addition, a special animal house for the proper care of experimental material is provided. Aside from the general equipment of the laboratory, each group of two students is provided with individual sets of apparatus and reagents. The laboratory is also provided with a collection of crude drugs, alkaloids, glucosides, and analytical chemicals.

The chemical, botanical, and zoological laboratories of the University are also open to students in the School of Medicine.

LIBRARY AND READING ROOM.

The medical library consists of over 3500 bound volumes and many unbound journals and reprints. There is a good collection of works on chemistry, anatomy, physiology, pharmacy, zoology, botany, pathology, bacteriology, pharmacology, medicine and surgery. There are bound volumes of the leading scientific journals as well as many of the leading German, French and American journals devoted to the laboratory side of medicine. The medical library occupies a separate room on the first floor of the Library building. It is open from 8:00 a. m. to 10:00 p. m. In addition each department has its own collection of books for the use of instructors and students.

MEDICAL SOCIETY.

The faculties of the School of Medicine and the Department of Pharmacy meet on Saturday morning twice a month from ten to 12 o'clock at which time original papers and reviews of current literature are presented by the members of the respective faculties. Students are welcome at these meetings.

TUITION AND FEES.

Students in the School of Medicine who are residents of the State are required to pay a tuition fee of $25.00 a semester. For students not residents of the state the fee is $100.00 a semester. All students must pay the following additional fees each semester: Contingent fee, $12.50; Student Activity fee, $5.00; Medical fee, $2.50. A diploma fee of $10 00 is payable by each student at the beginning of the semester in which he expects to graduate.

ADMISSION TO THE COURSE IN MEDICINE.

SECONDARY SCHOOL CREDITS.

For admission to the course in medicine the student must have credit for fifteen units of secondary school work, i. e., the work of the standard four-year high school.

A. The following groups are required:
   (1) Four units of English.
   (2) Three units in one other subject.
   (3) Two units in a third subject.
   (4) Two units in a fourth subject.
   (5) Four units elective.

B. In addition to the four units of English the work indicated in (A) must include: two units of Latin, one unit of history, one unit of algebra and one unit of plane geometry.

C. Work in the following subjects not to exceed the number of units placed after each subject will be accepted.

English	4 units	Science[3]	
		Physics	1 unit
Foreign languages[2]		Chemistry	1 unit
Latin	4 units	Biology	1 unit
Greek	3 units	Botany	1 unit
French	3 units	Geology	1 unit
German	3 units	Zoology	1 unit
Spanish	2 units	General science	1 unit
Italian	2 units	Physical geography	½ unit
		Physiology	½ unit
Mathematics		Hygiene and sanitation	½ unit
Algebra	1½ units	Vocational subjects (not to exceed four units in all)	
Plane geometry	1 unit		
Solid geometry	½ unit	Agriculture	3 units
Trigonometry	½ unit	Household arts	3 units
		Manual training	3 units
History and economics		Bookkeeping or bookkeeping and commercial artihmetic	2 units
History	3 units		
Civics	1 unit		
Elementary economics and sociology	1 unit	Shorthand and typewriting	2 units
		Commercial geography	½ unit
Education	2 units	Commercial law	½ unit
Drawing			
Free-hand drawing	1 unit	Music:—violin, organ or piano[4]	2 units
Mechanical drawing	1 unit		

[2]Not less than two units of one foreign language will be accepted for entrance.

[3]A group of two units in science may be made by combining one unit each of physics and chemistry or one unit each of any two of the following: biology, botany, zoology, geology. A group of three units in science may be made by combining one unit each of any three of the following: physics, chemistry, biology, botany, zoology, geology.

[4]For conditions governing credit for work in music see page 59 of the University catalogue.

COLLEGE CREDITS.

In addition to the fifteen units of secondary school credit as listed on the preceding page, the student must have credit for sixty-four hours' work done either in the College of Arts and Sciences of West Virginia University or in another institution of equal grade.

In accordance with the regulations of the American Medical Association and the Association of American Medical Colleges a schedule covering two years of premedical college work has been laid down as shown on pages

CONDITIONAL ADMISSION.

Under no circumstances will students be admitted to the course in medicine without having completed fifteen units of secondary school work and sixty hours of college work, including the subjects marked with an asterisk in the schedule, which are required by the medical association; but students who lack the remaining four hours of college work may be admitted to the course conditionally and may find opportunity to remove the condition in the Summer School or elsewhere before the completion of their two years in the School of Medicine.

FILING OF HIGH SCHOOL CERTIFICATES.

By a reslution of the State Board of Health all applicants for license to practice medicine in West Virginia are required to file with the secretary of the Board their certificate of high school graduation or its equivalent. The secretary will investigate doubtful cases, asking the aid when necessary of the University Committee on Classification and Grades.

THE COMBINED B. S. AND M. D. COURSE.

A student who desires to prepare himself for the practice of medicine and who has satisfied the requirements for entrance to the freshman class of the College of Arts and Sciences may matriculate in the College of Arts and Sciences and announce his intention of taking a combined scientific and medical course. After removing all entrance conditions and completing sixty-four hours (two years) of work in this college he may enter upon the two years course of the School of Medicine. On the completion of the course of this School he will receive the degree of Bachelor of Science. He may then enter a standard medical college, complete its course and receive the degree of Doctor of Medicine. His college and medical course together will in this case usually occupy six years.

The courses required in the College of Arts and Sciences and in the School of Medicine are indicated in the following schedule.

Courses in the College of Arts and Sciences.

First Year—First Semester.			First Year—Second Semester.		
*English 1	3		*English 2	3	
English 26[1]	2		English 27[1]	2	
*Chemistry 1	4		*Chemistry 2	4	
*Zoology 1	4		*Zoology 2	4	
German or French[2]	3		German or French[2]	4	
Military science	1	17	Military science	1	17
Second Year—First Semester.			**Second Year—Second Semester.**		
*Physics 1	3		*Physics 3	3	
*Physics 2	1		*Physics 4	1	
*Chemistry 18	5		Philosophy 12	3	
Elective 5	5		Chemistry 9	5	
Military science	1	15	Elective	2	
			Military science	1	15

Courses in the School of Medicine.

Third Year—First Semester.

COURSE	Hours a Week		Hours a Semester			PERIODS	CR.
	Lect.	Lab.	Lect.	Lab.	Total		
Physiological Chemistry 10	3	10	54	180	234	A. Lab., M. Th., 8-12 S. 8-10 B. Lab., T. F., 8-12 S. 11-1 Lect., W., 11-1 S. 10-11	5
Histology 12	2	8	36	144	180	A. Lab. T. F., 8-12 B. Lab. M. Th., 8-12 Lect. W., 8-12	5
Anatomy 13	4	11	75	195	270	M. T. W. Th. F., 2-5	7

Third Year—Second Semester.

Bacteriology 3	2	8	36	144	180	A. Lab. M. T. Th., 10-12 W., 11-1 B. Lab. T. W. Th. F., 8-10 Lect. M., 8, F., 11	5
Neurology 15	2	4	36	72	108	A. Lab. W. F., 8-10 B. Lab M., 10-12 W., 11-1 Lect. M., 9, F., 10	3
Embryology 6	2	4	36	72	108	A. Lab. T. Th., 8-10 B. Lab. T. Th. 10-12 Lect. T. Th., 2	3
Anatomy 14	3	6	54	108	162	M. W., 2-5, F., 3-6	
Physiology 2	1	3	18	54	72	A. Lab. T., 3; B. Th., 3 Lecture, W. 2.	
Pharmacolog 40		3			54	A. Lab. T., 3; B. Th., 3	1

Fourth Year—First Semester.

COURSE	Hours a Week		Hours a Semester			PERIODS	CR.
	Lect.	Lab.	Lect.	Lab.	Total		
Pathology 21	3	9	54	162	216	A. Lab. M. W. F., 2 B. Lab. T. Th., 2, Sat., 8 Lect. M. W. F., 8	5
Physiology 3	5	6	90	108	198	A. Lab. T. Th., 2 B. Lab. M. W., 2 Lect. M. T. W. Th., 9 F., 11	8
Pharmacology 42	2		36		36	Lect. & Rec. T. Th., 8	2
Hygiene 5	2		36		36	M., Th., 10-11	2
Physical Diagnosis 31	3	2	54	36	90	Lect. M. Th., 10 W., 11 Lab. (Clinic) T., 10-12	3

Fourth Year—Second Semester.

Pathology 22	1	5	18	90	108	Lect. T., 10 A. Lab. M., 2, F., 10 B. Lab. M., 8, W., 2	4
Pharmacology 41		6		108	108	A. Lab. W., 2 A. & B. Th., 9-12 B. Lab. M. 2	2
Pharmacology 43	4		72		72	Lect. M., 10; T. W. F., 8	4
Minor Surgery 51	3		54			T. W. F., 9	3
Physiology 7	1		18		18	T., 10	1
Applied Anatomy 17		6		108	108	T. Th., 2	1
Operative Sugery 52		3		54	54	Sat., 9	1
Physiology 12	1		18		18	F., 8	1

Fifth and Sixth Years.

To be taken at an approved school or college of medicine.

NOTE:—Medical students must take their work in sequence as shown in the schedule. If they fail in a course they may go on in the following year but the course must be taken again at the first opportunity.

COURSES OF INSTRUCTION

ANATOMY.

Professor S. J. MORRIS, Associate Professor DODDS and Mr. WHARTON.

1. Gross Anatomy. (7 Hrs.) Required of all first-year medical students. Lectures and recitations 70 hours; laboratory 200 hours.

First semester; 2:00-5:00; Professor MORRIS and Mr. WHARTON.

2. Gross Anatomy. (3 Hrs.) Required of all first-year medical students. Continuation of course 1. Lectures 60 hours; laboratory 128 hours.

Second semester; M. F., 2:00-6:00; W. 3:00-6:00; Professor MORRIS and Mr. WHARTON.

3. Neurology. (3 Hrs.) Required of all first-year medical students. Lectures 36 hours; laboratory 72. Prerequisite: Histology.

Second semester; lectures, M. 9:00, F. 10:00; laboratory, sec. A, W. F., 8:00-10:00; sec. B, M. 10:00-12:00, W. 11:00-1:00. Professor MORRIS and Mr. WHARTON.

4. Histology. (5 Hrs.) Required of all first-year medical students. Lectures 36 hours; laboratory 144 hours.

First semester; lectures W. 8:00 and 11:00; laboratory, sec. A, T. F., 8:00-12:00; sec. B, M. Th. 8:00-12:00. Associate Professor DODDS and Mr. WHARTON.

5. Embryology. (3 Hrs.) Required of all first-year medical students. Prerequisite: Histology. Lectures 36 hours; laboratory 72 hours.

Second semester; lectures T. Th. 2:00; laboratory, sec. A, T. Th. 8:00-10:00; sec. B, T. Th. 10:00-12:00. Associate Professor DODDS and Mr. WHARTON.

6. Applied Anatomy. (2 Hrs.) Required of all second-year medical students. Lectures 36 hours; laboratory 72 hours. Prerequisite: Anatomy 1 and 2.

Second semester; T. Th. 2:00-5:00. Professor MORRIS.

7. Advanced Histology. (2 Hrs.) Open to advanced and graduate students. Laboratory work and study of current literature on the subject.

Hours to be arranged; Associate Professor DODDS.

8. Advanced Embryology. (2 Hrs.) Open to advanced and graduate students.

Hours to be arranged; Associate Professor DODDS.

9. Advanced Anatomy. Open to advanced and graduate students.

Credit and hours to be arranged; Professor MORRIS.

10. Anatomy of the Eye, Ear and Nose. (2 Hrs.) Open to advanced and graduate students.

Hours to be arranged; Professor MORRIS.

BACTERIOLOGY AND PATHOLOGY.

Professor Arkin, Associate Professor Spray and Mr. Scott.

The following courses are required of all medical students: Bacteriology 3, 5 hrs.; Hygiene 5 (Hygiene and Sanitation), 2 hrs.; Pathology 21, 6 hrs.; Pathology 22, 3 hrs.

1. General Bacteriology. (3 Hrs.) A course in preparation of culture media, and study of bacteria with special reference to disease transmission and prevention. Elective. For non-medical students.

First semester; lecture T. Th., 8:00-9:00. Laboratory, T. Th., 2:00-4:00. Associate Professor Spray.

3. Medical Bacteriology. (5 Hrs.) Required of first year medical students. Preparation of culture media, and study of pathogenic bacteria and their relation to disease; their hygienic as well as pathologic relations. Bacteriologic examination of air, water, milk, foods, sputum, blood, etc. Isolation of bacteria from unknowns.

Second semester; lectures, (36 hrs.) M. 8:00; F. 11:00; laboratory, (144 hrs.) M. T. W. Th. F., 8:00 to 10:00 or 10:00 to 12:00; Associate Professor Spray and Mr. Scott.

4. Advanced Bacteriology. (3 Hrs.) Open to fourth year and graduate students. Advanced bacteriologic technique; methods employed in the conduct of modern research problems in bacteriology; special culture media, anaerobic cultivation, staining methods, etc.

Hours to be arranged; Professor Arkin and Associate Professor Spray.

5. Hygiene. (2 Hrs.) Required of second year medical students and open to graduate students. The principles of hygiene and sanitation as they pertain to the welfare of the individual; the care of the public health; prevention of communicable diseases; heredity; eugenics; immunity; food, air and water as sources of disease; personal hygiene; school hygiene; occupational diseases; vital statistics.

First semester; lectures (36 hrs.) M., Th., 10:00. Associate Professor Spray.

6. Research in Bacteriology. (Credit according to work done.) Open to limited number of graduate students in medicine.

7.† State and Municipal Laboratory Methods. (2 Hrs.) Open to fourth year and graduate students. The diagnosis of typhoid, diphtheria, tuberculosis, syphilis, gonorrhea, rabies, etc. and bacteriologic examination of water, milk, food, etc. Prerequisite: Bacteriology 3 or its equivalent.

Hours to be arranged; Professor Arkin.

8. Immunity. (2 Hrs.) Open to fourth year and graduate students. A study of immunity with laboratory work on animals, cytolysis, agglutination; toxins; precipitins; phagocytosis; anaphylaxis;

complement fixation; and their application to diagnosis and treatment. Prerequisite: Bacteriology 3 and Pathology 21.

Hours to be arranged; Professor A8æ| & and Associate Professor SPRAY.

9. Hygiene and Sanitation. (2 Hrs.) Open to sophomores, juniors and seniors. Not for medical students. This course considers the principles of hygiene and sanitation as they pertain to the individual and the care of the public health. For teachers, public health workers and domestic science students.

First semester; lectures, T. Th., 8:00; Professor ARKIN.

10. Hygiene and Sanitation Laboratory. (2 Hrs.) Open to limited number of students. Not open to medical students. Experiments in bacteriology as it relates to hygiene and disease prevention.

First semester; T. Th., 2:00-4:00; Associate Professor SPRAY, M. B.

11.† Laboratory Diagnosis. (2 Hrs.) A laboratory course in blood, gastric contents, etc., and their pathologic and clinical significance. Prerequisite: Bacteriology 3 and Physiological Chemistry 10. Open to senior and graduate students.

Hours to be arranged.

21.† General Pathology. (6 Hrs.) Required of second year medical students. Open to graduate students. The technique of tissue preparation, staining and mounting; disturbances of circulation and nutrition; inflammations; degenerations; infiltrations; necrosis; infectious granulomas and tumors; lectures, demonstrations, and laboratory work. Prerequisites: physiological chemistry, histology, physiology, anatomy, and bacteriology.

First semester; lectures (54 hrs.) M. W. F., 8:00; laboratory (162 hrs.), M. W. F., 2:00-5:00 or T. Th., 2:00-5:00 and Sat., 8:00-11:00; Professor ARKIN and Mr. SCOTT.

22.† Pathology of Infectious Granulomas and Tumors. (3 Hrs.) Required of second year medical students. Open to graduate students. Continuation of Pathology 21. Tuberculosis, syphilis, actinomycosis, blastomycosis, etc., and the benign and malignant tumors. A study of the pathology of special organs is made. Lectures, recitations, and laboratory work. Prerequisite: Pathology 21.

Second semester; lectures (18 hrs.) T. 10:00; laboratory (90 hrs.) M. 2:00-5:00 and F. 10:00-12:00 or W. 2:00-5:00 and M. 8:00-10:00; Professor ARKIN and Mr. SCOTT.

23.† Advanced Pathology. (3 Hrs.) This course is open to a limited number of students who have credit for Pathology 21. Special technique, autopsy work, pathological physiology.

Both semesters; hours to be arranged; Professor Arkin.

24. **Research in Pathology.** (Credit according to work done.) Open only to graduate students; Professor Arkin.

25. **Seminar in Pathology and Bacteriology.** (1 Hr.) Review of current literature. For advanced students.

Both semesters; S. 10:00; Professor Arkin.

PHARMACOLOGY.

Professor Bonar, Associate Professor Kessel and Mr. Beers.

40. **Chemical Pharmacology.** (1 Hr.) The course includes elementary pharmacy, general toxology, drug reactions, incompatibilities, flavors and colors, the chemical basis of pharmacology and the principles of prescription writing. Three hours per week (54 Hrs.)

Second semester; two sections. T. and Th., 3:00; Mr. Beers.

41. **Pharmacodynamics.** (2 Hrs.) Experiments and demonstrations on cold and warm-blooded animals illustrating the action of drugs and the methods of pharmacologic experimentation. Six hours per week (108 Hrs.)

Second semester; M. and W., 2:00; two sections, Th., 9:00-12:00. Conferences and demonstrations. Professor Bonar, Associate Professor Kessel and Mr. Beers.

42. **Systematic Pharmacology.** (2 Hrs.) Systematic lectures and quizzes treating of the experimental, toxic, and therapeutic actions and uses of the more important drugs; assigned problems; practical drug identification and drill in prescription writing. Two hours per week (36 Hrs.)

First semester; T. and Th., 8:00; Professor Bonar.

43. **Systematic Pharmacology.** (4 Hrs.) Continuation of course 42. Four hours per week (72 Hrs.)

Second semester; M., 10:00; T. W. F., 8:00; Professor Bonar and Associate Professor Kessel.

44. **Bio-Assay.** (Credit according to work done). Open to properly qualified students. Special Pharmacodynamics.

Hours to be arranged; Professor Bonar and Mr. Beers.

45. **Toxicology.** (2 Hrs.) A special course devoted to the study of the methods—chemical and biological—of detecting poisons of medico-legal interest. Prerequisite: Pharmacology 40 and 41. (Total 72 Hrs.)

First semester; T. Th., 9:00-11:00; Professor Bonar.

48. **Pharmacology Research.** Problems open to specially interested students with proper qualifications.

Hours to be arranged; Professor Bonar.

PHYSIOLOGY.

Professors VAN LIERE and MORSE, Associate Professor KESSEL and Mr. FRAME.

2. **Physiology.** (2 Hrs.) Required of all first year students. Physiology of the tissues, muscle, nerve, gland cells, blood, and lymph. Lectures and demonstrations one hour each week throughout the second semester. Prerequisites: physiological chemistry and Anatomy 1 and 2.

Second semester; lectures, W. 2:00; laboratory work. Section A, T. 3:00-6:00, and Section B, W. 2:00-6:00; Professor VAN LIERE and Mr. FRAME.

3. **Physiology.** (8 Hrs.) Required of all second year students. Physiology and respiration, circulation, physical factors of digestion, secretion and excretion, the central nervous system, and the special senses. Lectures and demonstrations five hours each week throughout the first semester. Prerequisites: Physiology 1, Anatomy 14 and 15. Open to senior and graduate students.

First semester; lectures, M. T. W. Th. F., 9:00 to 10:00; laboratory; section A. M. W., 2:00-5:00; section B, T. Th., 2:00-5:00; Professor VAN LIERE, Associate Professor KESSEL, Mr. FRAME and Mr. BEERS.

7. **Physiology.** (1 Hr.) Physiology of the automatic nerves, internal secretions and reproduction. Lectures and demonstrations one hour each week throughout the second semester. Required of all second year students. Prerequisites: Physiology 2. Reports on assigned topics from literature are required of all students as a part of the work of this course.

Second semester; 10:00-11:00; Professor VAN LIERE.

12. **Physiology.** (1 Hr.) Physiology of nutrition, metabolism and animal heat. Lectures one hour each week. Required of all second year students. Prerequisite: Physiology 2.

Second semester; Th., 8:00-9:00; Professor MORSE.

13. **Advanced Experimental Physiology.** (5 Hrs.) A course in physiological research open to advanced students who have completed the other work in physiology or its equivalent and who are otherwise qualified to do the work. Work consists of investigation, under the direction of members of the department, of assigned or original problems. Original problems must meet the approval of the department. 10 hours laboratory and 2 hours conference.

Hours to be arranged; Professor VAN LIERE.

1. **Obstetrics.** (2 Hrs.) Introductory course in obstetrics.

Hours to be arranged; Professor VAN LIERE.

PHYSIOLOGICAL CHEMISTRY.

Professor MORSE and Mr. FRAME.

10. Physiological Chemistry. The course is divided into two portions, namely, ten weeks devoted to physical and descriptive chemistry and the remainder of the time devoted to the special chemistry of the tissues and of metabolism, including urinary analysis. This course is supplemented in the second semester by course 4. Required of all medical students. Prerequisites: organic chemistry and quantitative analysis.

Lecture 36 hours. Laboratory 144 hours. Section A, M. F., 8:00-12:00; S., 8:00-10:00; Section B, T. Th., 8:00-12:00; S., 11:00-1:00; lectures W. 9:00; S., 10:00; Professor MORSE and Mr. FRAME.

11. Advanced Physiological Chemistry. Elective for those who have completed course 6. A thesis, which must be accepted for publication by a journal of physiological research will be required for credit in this course.

Hours to be arranged.

12. Blood and Urine Chemistry.

Hours to be arranged.

8. Seminar in Physiology and Physiological Chemistry. Meetings will be held during the winter months at fortnightly intervals, in which special topics will be considered. Topic for 1921-22: Origin of the heart beat.

PHYSICAL DIAGNOSIS.

Dean SIMPSON and Dr. BRAY.

31. Physical Diagnosis. (3 Hrs.) Required of second year medical students. An introductory course in the study of the taking of medical histories, inspection, palpation, percussion, and ausculation of patients in health and disease.

First semester; lecture, M. and F., 11:00; laboratory, T., 10:00-12:00.

MINOR SURGERY.

Dr. HARDY and Professor MORRIS.

51. Minor Surgery and Operative Technique. (3 Hrs.) Required of second year medical students. Open to graduate students. Instruction by demonstrations and practice in the various manipulations of minor surgery, including the application of splints and bandages. Lectures and practical work in the principles of asepsis, anti-sepsis, and

sterilization; preparation of patient and operator; dressings and care of wounds. Practical instruction of individual students in the induction of general and local anesthesia.

Second semester; T. W. F., 9:00; Dr. HARDY, City Hospital.

52. **Operative Surgery.** A course of practical instruction in operative surgery utilizing the lower animals as subjects. Asepsis will be maintained throughout the work. A special room is assigned to this work in the animal house.

Second semester; Saturdays; 9:00-12:00; Professor MORRIS.

THE DEPARTMENT OF PHARMACY

THE SCHOOL OF MEDICINE

THE FACULTY.

FRANK BUTLER TROTTER, A.M., LL.D., *President*

JOHN NATHAN SIMPSON, M.D., *Dean of The School of Medicine*

GORDON ALGER BERGY, PH.C., M.S., *Professor of Pharmacy*

J. LESTER HAYMAN, PH.C., B.S., *Instructor in Pharmacy*

ELMER L. HAMMOND, PH.C., B.S., *Instructor in Pharmacy*

FRIEND EBENEZER CLARK, B.S., PH.D., *Professor of Chemistry*

HARLAN HARVEY YORK, PH.D., *Professor of Botany*

AARON ARKIN, PH.D., M.D., *Professor of Pathology and Bacteriology*

MARTIN LOXLEY BONAR, M.D., *Professor of Pharmacology*

WITHROW MORSE, PH.D., *Professor of Physiology and Physiological Chemistry*

ESTABLISHSMENT OF THE DEPARTMENT.

In response to the request of the West Virginia State Pharmaceutical Association the Board of Regents in 1914 made provision for instruction in pharmacy. A department of pharmacy was established in the School of Medicine and a two year course in pharmacy leading to the professional degree of Graduate in Pharmacy (Ph.G.) was offered.

In 1917 additional courses of three and four years, leading to the degrees of Pharmaceutical Chemist (Ph.C.) and Bachelor of Science in Pharmacy (B.S. Pharmacy) were established. The degree of Graduate in Pharmacy given for two years of pharmaceutical work is recognized by such State Boards of Pharmacy as require a course in pharmacy preliminary to examination for registration.

The West Virginia State Board of Pharmacy in addition to the practical training or store experience, demands as a minimum educational requirement, graduation from a recognized school of pharmacy, holding membership in the American Conference of Pharmaceutical Faculties, with the degree of Graduate in Pharmacy. The higher recognized degrees of Pharmaceutical Chemist and Bachelor of Science in Pharmacy are accepted in lieu of the degree of Graduate in Pharmacy.

State Pharmacy Law.

Extract from law of the State of West Virginia governing the practice of pharmacy: SEC. 11. In order to be hereafter licensed as a pharmacist within the meaning of this act an applicant shall be not less than twenty-one years of age, and shall present to the board of pharmacy satisfactory evidence that he has had four years' experience in pharmacy under the instruction of a licensed pharmacist, and he shall pass a satisfactory examination by or under the direction of the board of pharmacy; in order to be licenseed as an assistant pharmacist, within the meaning of this act, an applicant shall be not less than eighteen years of age, shall have a sufficient preliminary general education, and shall have not less than two years' experience in pharmacy under the instruction of a licensed pharmacist and shall pass a satisfactory examination by or under the direction of the board of pharmacy; provided, however, that in the case of a person who has attended a reputable school or college of pharmacy, the actual time of attending such school or college of pharmacy may be deducted from the time of experience required of pharmacists, but in no case shall less than two years' experience be required for graduation as a licensed pharmacist.

LABORATORIES AND EQUIPMENT.

The Department of Pharmacy has spacious quarters in Woodburn Hall. The equipment for all of the courses offered in the department is complete and the latest design.

PHARMACEUTICAL LABORATORIES.

The pharmaceutical laboratories are fully equipped for the manufacture of pharmaceutical preparations and for the performance of pharmaceutical, alkaloidal, and toxicological analysis. There are two well lighted laboratories approximately thirty feet square. All drugs and chemicals required in the manufacture of pharmaceutical preparations are preserved in glass containers, labelled according to the nomenclature of the Pharmacopoeia and National Formulary, and conveniently located on shelves accessible to all students in the laboratory. One laboratory is especially fitted for instruction in manufacturing pharmacy. It is equipped with a force-feed ointment mill, for the preparation of heavy ointments, paints, tooth pastes, and other similar preparations; a pill mass mixer, kneading machine, piping and troche machine, tablet triturate, and hypodermic tablet plates, a power-operated compressed tablet machine with full set of dies, pill and tablet coating machines for gelatine and sugar coating, polishing machines, pressure suppository machine and fusion molds of all types, a Hance power drug mill, and a laboratory drug mill.

A prescription laboratory is operated in conjunction with the Dispensary of the University Health Service. Each student is supplied with a full set of pharmaceutical apparatus and glassware necessary for the compounding of prescriptions. Torsion balances, encased in glass are a part of this regular equipment.

THE MUSEUM OF PHARMACOGNOSY.

The pharmacognosy collection consists of approximately three hundred and fifty medical plants secured from all parts of the world for instruction in materia medica. For instructional purposes several large collections have been arranged. These are (a) a large display collection, (b) a labeled collection for student study, (c) an unlabeled collection for identification, and (d) a collection of powdered drugs for the purpose of histological study. The museum is provided with floor cases, tables, charts, maps, photographs and compound miscroscopes.

LABORATORY OF MEDICAL BACTERIOLOGY.

The bacteriological laboratory is equipped with all necessary apparatus, such as sterilizers, incubators, glassware, etc. Each student has the use of a microscope with oil immersion lens. Special apparatus for bacteriological examination of air, water, milk, and blood is supplied to each student. Material for laboratory work in bacteriological diagnosis, such as Widal tests for typhoid, examination of sputum for tubercle bacilli, bacteriological examination of water, etc. is available.

PHARMACOLOGICAL LABORATORY.

The pharmacological laboratory is equipped with chemical desks, operating tables, and electrical kymograph and respiration apparatus for taking continuous records of respiration and blood pressure. Special animal cages are provided to meet the needs of courses 41 and 47 inclusive. In addition, a special animal house for the proper care of experimental material is provided. Aside from the general equipment of the laboratory, each group of two students is provided with individual sets of apparatus and reagents. The laboratory is also provided with a collection of crude drugs, alkaloids, glucosides, and analytical chemicals.

The chemical, botanical and zoological laboratories of the University are also open to students in the School of Medicine.

PHYSIOLOGY LABORATORIES.

The laboratories devoted to physiology on the first floor of the medical building are supplied with tables each accommodating two students. Each table is equipped with a complete set of general physiological apparatus which is lent to the students with a charge for breakage. Special apparatus is supplied from the storeroom to individual groups as needed. Sufficient equipment is provided to enable the students to perform all the experiments listed in standard laboratory manuals and for the demonstration by instructors of experiments which cannot be conveniently performed by the student.

Private rooms and equipment for research are provided for members of the department.

PHYSIOLOGICAL CHEMISTRY LABORATORIES.

The physiological chemistry laboratories are situated upon the second floor of the medical building and consist of a students' laboratory, containing the usual equipment of desks, hood, etc., the departmental office with reference library and a research laboratory beyond this. An individual research room is provided for the assistant in the department. A dark-room is available for work requiring its use, as in polariscope work, etc.

OTHER LABORATORIES.

The laboratories of the departments of botany, chemistry, and physics in the College of Arts and Sciences are also open to students in the department of pharmacy. A detailed description of these laboratories is given on pages 24-26 of the General Announcements of the University.

LIBRARY AND READING ROOM.

The medical library consists of over 3200 bound volumes and many unbound journals and reprints. There is a good collection of works on chemistry, anatomy, physiology, pharmacy, zoology, botany, pathology, bacteriology, pharmacology, medicine, and surgery. There are bound volumes of the leading scientific journals as well as some of the leading German, French and American, Journals devoted to the laboratory side of medicine. The general library is in close proximity to the medical laboratories and is open all day and till ten o'clock at night.

DISPENSARY AND MEDICAL SERVICE.

All students in the University pay a medical fee of $2.50 each per semester, in return for which they receive free drug service from the department of pharmacy, and free medical attention, including minor surgery (specialties excepted) from the faculty of the School of Medicine.

A clinic for out patients is conducted by the physicians of the medical faculty. This service is rendered free to the poor of the immediate vicinity. The prescriptions are compounded at the dispensary of the Student Health Service by advanced students of the department of pharmacy under the supervision of a registered pharmacist.

PHARMACEUTICAL ASSOCIATIONS.

The West Virginia Branch of the American Pharmaceutical Association.

The headquarters of the West Virginia Branch of the American Pharmaceutical Association are at Morgantown. This branch of the national organization is composed of the representative pharmacists of West Virginia. Students of pharmacy are eligible to membership in the branch and are privileged to attend the lectures and meetings without becoming members. Address communications to A. B. Berry, Secretary, Morgantown, W. Va.

The West Virginia State Pharmaceutical Association.

Students of pharmacy are eligible to membership in this organization, which has for its object the improvement of the science and art of pharmacy, the inculcation of the professional spirit and the restriction of the practice of pharmacy to persons properly qualified by education and experience to exercise their art with safety to the public. Address communications to Patrick G. Kelly, Montgomery, W. Va.

American Conference of Pharmaceutical Faculties.

The Department of Pharmacy holds membership in the American Conference of Pharmaceutical Faculties. The object of the Conference is to promote the interests of the pharmaceutical education and all institutions holding membership in the same must maintain certain minimum requirements for entrance and graduation. Thru the influence of this conference higher standards of education have been adopted from time to time and the fact that several states by law or by Board ruling recognize the standards of the Conference is evidence of this influence.

Pharmacists' Register.

A pharmacists' register for the benefit both of the employer and employee has been established by the Pepartment of Pharmacy. No charge is made for services rendered.

TUITION AND FEES.

All students in the courses in pharmacy who are residents of West Virginia must pay a tuition fee of $25.00 a semester. Non-resident students must pay $100.00 a semester. In addition to the tuition fee each student must pay each semester: Contingent fee, $12.50; Student activity fee, $5.00; Medical fee, $2.50. A diploma fee of $10.00 is payable by each student at the beginning of the semester in which he expects to graduate.

ADMISSION TO THE SCHOOL IN PHARMACY.

SECONDARY SCHOOL CREDITS.

For admission to the course in pharmacy the student must have credit for fifteen units of secondary school work, i. e., the work of a standard four-year high school.

A. The following groups are required:
   (1) Four units of English.
   (2) Three units in one other subject.
   (3) Two units in a third subject.
   (4) Two units in a fourth subject.
   (5) Four units elective.

B. In addition to the four units of English the work indicated in (A) must include: two units of Latin, one unit of history, one unit of algebra, and one unit of plane geometry.

C. Work in the following subjects not to exceed the number of units placed after each subject will be accepted:

English	4 units	Science[3]	
		Physics	1 unit
Foreign languages[2]		Chemistry	1 unit
Latin	4 units	Biology	1 unit
Greek	3 units	Botany	1 unit
French	3 units	Geology	1 unit
German	3 units	Zoology	1 unit
Spanish	2 units	General science	1 unit
Italian	2 units	Physical geography	½ unit
		Physiology	½ unit
Mathematics		Hygiene and sanitation	½ unit
Algebra	1½ units		
Plane geometry	1 unit	Vocational subjects (not to exceed four units in all.)	
Solid geometry	½ unit	Agriculture	3 units
Trigonometry	½ unit	Household arts	3 units
		Manual training	3 units
History and economics		Bookkeeping or bookkeeping and commercial arithmetic	2 units
History	3 units	Shorthand and typewriting	2 units
Civics	1 unit	Commercial geography	½ unit
Elementary economics and sociology	1 unit	Commercial law	½ unit
Education	2 units	Music:—violin, organ or piano[4]	2 units
Drawing			
Free-hand drawing	1 unit		
Mechanical drawing	1 unit		

[2]Not less than two units of one foreign language will be accepted for entrance.

[3]A group of two units in science may be made by combining one unit each of physics and chemistry or one unit each of any of the following: biology, botany, zoology, geology. A group of three units in science may be made by combining one unit each of any of the following: Physics, chemistry, biology, botany, zoology, geology.

[4]For conditions governing entrance credit in music see page 59 of the University catalogue.

COURSES IN PHARMACY.

TWO YEAR COURSE.

The two-year course provides the foundation work in pharmacy and pharmacognosy, together with those essentials of analytical chemistry necessary in the drug business.

All the subjects gathered in this course are compulsory, there being no electives. The laboratory method of instruction is emphasized. The number of actual hours spent in this course is 2,200, of which 1411 are spent in the laboratory and the remaining 799 hours in lectures and quiz.

CURRICULUM FOR TWO-YEAR COURSE.

Professional Degree of Ph.G. (Graduate in Pharmacy.)

First Year—First Semester.

Pharmacy 1	8:00 T. Th.	2	
Pharmacy 2	8:00 M. W. F.	3	
Pharmacy 3	2:00–5:00 T. Th.	2	
Pharmacy 12	9:00 M. F.	2	
Phar. Botany 6	10:00 M. W. F. 9:00-12:00 T. Th. S.	6	
Chemistry 1	11:00 M. W. F. 2:00-4:00 M. F.	4	19

First Year—Second Semester.

Pharmacy 4	8:00 T. Th.	2	
Pharmacy 5	2:00–5:00 T. Th. 9:00-12:00 S.	3	
Pharmacy 13	8:00 M. W. F.	3	
Pharmacy 14	9:00–12:00 T. Th.	2	
Physiology 1	9:00 M. W. F. 2:00-5:00 W.	4	
Chemistry 2	11:00 M. W. F. 2:00-4:00 M. F.	4	
Phar. Botany 7	10:00 M. F.	2	20

Second Year—First Semester.

Pharmacy 6	2:00 M. W. F.	3	
Pharmacy 7	2:00–5:00 T. Th.	2	
Pharmacy 10	3:00 M. W. 2:00-5:00 F. 9:00-12 S.	4	
Pharmacy 15	8:00 M. T. W. Th. F.	5	
Chemistry 18	9:00–12:00 M. T. W. Th. F.	5	19

Second Year—Second Semester.

Pharmacy 8	9:00 M. W. F.	3	
Pharmacy 11	2:00–5:00 M.	1	
Pharmacy 19	8:00 T. Th.	2	
Pharmacology 52	11:00 M. T. F.	3	
Pharmacology 55	9:00–12:00 Th.	1	
Chemistry 9	10:00 M. F. 11:00 W. 2:00-5 T. W. Th.	5	15

Note.—Pharmacy students should elect their work in sequence as shown in the schedule. If they fail in one or more courses during a semester, they may continue the work during the following semester, but the course or courses in which they have failed must be retaken at the first opportunity. Students will not be allowed to elect an advanced course until all prerequisite requirements have been satisfied.

THREE-YEAR COURSE.

For the completion of the three-year course the degree of Pharmaceutical Chemist (Ph. C.) is awarded. The course is designed particularly for those who desire to enter the commercial field of pharmaceutical chemistry and food and drug chemistry, or for those pharmacists who wish to strengthen their professional relations by the practice of urinary, bacteriological and toxicological analysis for the physician. Students are advised to select one phase of the advanced work and pursue it to completion as outlined, as there would not be sufficient time in three years to permit the successful accomplishment of both.

CURRICULUM FOR THREE-YEAR COURSE.

Professional Degree of Pharmaceutical Chemist. (Ph. C.)

First Year.

First Semester.	Hours Credit	Second Semester.	Hours Credit
Pharmacy 1	2	Pharmacy 4	2
Pharmacy 2	3	Pharmacy 5	3
Pharmacy 3	2	Pharmacy 13	3
Pharmacy 12	2	Pharmacy 14	2
Phar. Botany 6	6	Physiology 1	4
Chemistry 1	4 19	Chemistry 2	4
		Phar. Botany 7	2 20

Second Year.

Pharmacy 6	3	Pharmacy 8	3
Pharmacy 7	2	Pharmacy 11	1
Pharmacy 10	4	Pharmacy 19	2
Pharmacy 15	5	Pharmacology 52	3
Chemistry 18	5 19	Pharmacology 55	1
		Chemistry 9	5 15

Third Year.

English 1	3	English 2	3
English 26	2	English 27	2
Pharmacy 9	3	*Bacteriology 3	4
French or German	5	French or German	5
Chemistry 10	3 16	Hygiene & Sanitation 5	2
		Pharmacy 16	3 19

*Chemistry 38 may be substituted for Bacteriology 3.

FOUR-YEAR COURSE.

The four-year course is a combined academic and professional course including one hundred and thirty-six semester hours of work as shown in the following curriculum.

Professional Degree of Bachelor of Science in Pharmacy. (B.Sc.Phar.)

First Year.

First Semester.	Hours Credit	Second Semester.	
English 1	3	English 2	3
English 26	2	English 27	2
Mathematics 3	3	Mathematics 4	2
Phar. Botany 6	6	Physiology 1	4
Chemistry 1	4 18	Chemistry 2	4
		Phar. Botany 7	2 17

Second Year.

Pharmacy 1	2	Pharmacy 4	2
Pharmacy 2	3	Pharmacy 5	3
Pharmacy 3	2	Pharmacy 13	3
Pharmacy 10	4	Pharmacy 14	2
Pharmacy 12	2	Chemistry 6	5 15
Chemistry 5	4 17		

Third Year.

Pharmacy 15	5	Bateriology 3	5
Pharmacy 6	3	Pharmacology 52	3
Pharmacy 7	2	Pharmacology 55	1
Pharmacy 9	3	Pharmacy 11	1
Economics 1	3 16	Chemistry 9	5 15

Fourth Year.

Physics 1	3	Physics 3	3
Physics 2	1	Physics 4	1
Hygiene & Sanitation	2	Pharmacy 8	3
Chemistry 19	3	Pharmacy 19	2
French or German	5	French or German	5
Chemical Eng. 180	2	Pharmacy 16	3
Ind. Chem. Lab. 175	2 18	Chemistry 31	2 19

COURSES IN DEPARTMENT OF PHARMACY.

PHARMACY.

Professor BERGY, Mr. HAYMAN, and Mr. HAMMOND.

1. **Theoretical Pharmacy.** (2 Hrs.) Descriptive and experimental lectures and recitations, embracing a study of the apparatus and technique necessary for the correct procedure in the manufacture of pharmaceutical preparations. (36 hours.)

First semester; T. Th., 8:00; Mr. HAMMOND.

2. **Pharmaceutical Arithmetic and Stoichiometry.** (3 Hrs.) Lectures and recitations. (50 hours).

First semester; M. W. F., 8:00; Mr. HAMMOND.

3. **Physics of Pharmacy.** (2 Hrs.) A laboratory course designed to accompany courses 1 and 2 in pharmacy. Quizzes and laboratory (100 hours).

First semester; T. Th., 2:00-5:00; Mr. HAMMOND.

4. **Operative Pharmacy Lectures.** (2 Hrs.) A systematic consideration of the various official preparations for which the Pharmacopoeia and National Formulary gives formulas and processes. Lectures and recitations. Prerequisite: Pharmacy 1, 2, and 3. (50 hours.)

Second semester; T. Th. 8:00; Mr. HAMMOND.

5. **Operative Pharmacy Laboratory.** (3 Hrs.) This course is carried on in conjunction with Pharmacy 4. The representative classes of preparations of the Pharmacopoeia and National Formulary are manufactured. Students are required to pass an examination in the identification of these preparations by their physical characteristics. Laboratory (150 hours).

Second semester; T. Th., 2:00-5:00; S., 9:00-12:00; Professor BERGY and Mr. HAMMOND.

6. **Manufacturing Pharmacy Lectures.** (3 Hrs.) The more difficult pharmaceuticals and miscellaneous preparations are considered in connection with the modern methods of manufacture. Lectures and recitations. (50 hours). Prerequisite: Pharmacy 4 and 5.

First semester; M. W. F., 2:00; Professor BERGY.

7. **Manufacturing Pharmacy Laboratory.** (2 Hrs.) The individual preparations are usually assigned in the form of a prescription and include those classes generally made extemporaneously. About one hundred miscellaneous prescriptions are compounded and the existing incompatibilities studied. Every prescription must be labeled and wrapped as in actual practice. Laboratory (100 hours).

Prerequisite: Pharmacy 4 and 5.

First semester; T. Th., 2:00-5:00; Professor BERGY.

8. **Prescriptions and Incompatibilities.** (3 Hrs.) The prescription is studied relative to the interpretation of the chemical, pharmaceutical, and therapeutical incompatibilities, posology, art of dispensing and Latin nomenclature. Lecture and recitations (50 Hrs.) Prerequisite: Pharmacy 1, 2, 3, 4, 5, 6 and 7.

Second semester; M. W. F., 9:00; Mr. HAYMAN.

9. **Assay and Pharmaceutical Testing.** (3 to 5 Hrs.) A critical study of the identity, purity, limit and percentage tests of the pharmocopoeia as applied to all official organic and inorganic compounds. Lectures (25 Hrs.) Laboratory (50 Hrs.) Prerequisite: Chemistry 5, 6 and 9.

Second semester; M. W., 8:00; T. Th., 2:00-5:00; S., 9:00-12:00; Professor BERGY.

10. **Commercial Pharmacy.** (4 Hrs.) The establishment, management, and development of a modern pharmacy, with special emphasis on business economics, accounting, correspondence, salesmanship and advertising. Lectures and recitations.

First semester; M. W., 3:00; F., 2:00-5:00; S., 9:00-12:00; Mr. HAYMAN.

11. **Prescription Practice.** (1 Hr.) Compounding and interpretation of prescriptions as met with in actual practice. Laboratory work 50 hours. Prerequisite: Pharmacy 4, 5, 6, 7 and 8.

Second semester; M., 2:00-5:00; Mr. HAYMAN.

12. **Pharmaceutical Latin.** (2 Hrs.) Emphasis is placed upon pronunciation, declension, English and Latin translation, comparison, abbreviations and vocabularies of medicine and pharmacy.

First semester; M. F., 9:00; Mr. HAYMAN.

13. **Pharmaceutical Chemistry.** (3 Hrs.) A course dealing specifically with inorganic chemistry as applied to pharmacy. Nonmetals, metals, and their inorganic compounds, equation writing, stochimetry, etc., are discussed. The modern methods of commercial manufacture of inorganic chemicals are considered. The students prepare a large number of inorganic chemicals in the laboratory.

Second semester; M. W. F., 8:00; Professor BERGY and Mr. HAMMOND.

14. **Microscopy.** (2 Hrs.) A detailed study of the microscope and accessories and their uses in the arts, sciences and industries; microscopical characteristics of starches, powdered vegetable drugs, and their adulterants.

Second semester; T. Th., 9:00-12:00; Mr. HAYMAN.

15. **Pharmacology.** (5 Hrs.) Lectures and recitations including official titles and definitions, families, constituents, actions, uses and doses together with practical work in identification of more than 200 useful drug plants. Animal drugs and their materia medica are considered.

First semester; M. T. W. Th. F., 8:00; Mr. HAYMAN.

16. **Organic Anaylsis.** (3 Hrs.) A lecture and laboratory course which has for its subject matter the chemistry, means of detection, and the qualitative analysis of the alkaloids and synthetic chemicals. Required in the three-year and four-year courses.

Second semester; M. W., 2:00-5:00; Mr. HAYMAN.

17. **Food and Drug Analysis.** (2 to 5 Hrs.) A graded course of lectures and laboratory work with collateral reading. Prerequisites: Chemistry 1, 2, 18, 9.

First semester; M. T. W. Th. F., 2:00-5:00; Professor BERGY and Mr. HAYMAN.

18. **Food and Drug Anaylsis.** (2 to 5 Hrs.) A continuation of Pharmacy 17. Analysis and practice in detecting adulteration in a large and varied number of preparations.

Second semester; M. T. W. Th., 2:00-5:00; Professor BERGY and Mr. HAYMAN.

19. **U. S. P. and N. F.** A comprehensive study of the United States Pharmacopoeia and the National Formulary, including review work on related subjects.

Second semester; M. F., 8:00; Professor BERGY.

PHARMACOLOGY.

52. **Pharmacology.** (3 Hrs.) Required of all second year students in pharmacy. This lecture course aims to give a general survey of the pharmacodynamic action of the more potent drugs which the pharmacist is called upon to dispense.

Second semester; M. W. F., 10:00; Professor BERGY.

5. **Pharmacodynamics.** (1 Hr.) Required of all second year students in pharmacy. This is a laboratory course beginning with simple experiments upon cold blooded animals, followed by more complex experiments with the lower animals. The experiments are so selected as to adapt the training to the needs of modern pharmacy, laying particular emphasis upon toxicology and methods of quantitative physiological tests for drugs.

Second semester; Th., 9:00-12:00; Professor BONAR.

CHEMISTRY.

Professor CLARK and Staff.

1. **Inorganic Chemistry.** (4 Hrs.) The course includes a systematic study of the laws of chemical combination; the source, preparation, properties and compounds of the non-metallic elements and the theories and laws of chemical operation. Experimental lectures, recitations and laboratory work.

First semester; M. W., 11:00; laboratory, M. F., 2:00-4:00; Professor MORRIS and Mr. ————.

2. **Inorganic Chemistry.** (4 Hrs.) Continuation of Chemistry 1. This course includes the study of the metallic elements and special attention is paid to the applications of chemistry to agriculture, engineering, medicine, pharmacy and every-day life. Experimental lectures, recitations and laboratory work.

Second semester; M. W. F., 11:00; laboratory, M. F., 2:00-4:00; Professor MORRIS and Mr. ————.

18. **Qualitative and Quantitative Analysis.** (5 Hrs.) A course for students preparing for medicine.

First semester; daily 9:00-12:00; Associate Professor HILL.

5. **Qualitative Analysis.** (4 Hrs.) Continuation of Chemistry 2. This is an extended course treating of those properties which are of importance in the separation and identification of the common metals and acids. In addition to the work in the laboratory there are lectures and recitations in which chemical reactions are studied from the point of view of the mass law and the theory of electrolytic dissociation.

First semester; M. W. F., 2:00-5:00; Professor CLARK.

6. **Quantitative Analysis.** (5 Hrs.) A course treating of the elementary principles of gravimetric and volumetric analysis.

Second semester; M., 2:00; laboratory, T. W. Th. F., 2:00-5:00: Professor CLARK.

9. **Organic Chemistry.** (6 Hrs.)

Second semester; M. F., 10:00; W., 11:00; 2:00-5:00; T. W. Th. Professor CLARK.

Note.—Hours arranged for pharmacy students.

19.† **Industrial Chemistry.** (3 Hrs.) Open to major and graduate students and to students in chemical engineering.

First semester; M. W. F., 9:00; Professor CLARK.

22.† **Industrial Chemistry.** (3 Hrs.) Open to major and graduate students and to students in chemical engineering.

First semester; M. W. F., 9:00; Professor CLARK.

*21. **Physical Chemistry.** (5 Hrs.) Required of major students. For graduate students and chemical engineering students also. Three lectures and two three-hour laboratory periods weekly.

Second semester; 2:00;

15. **Special Work.** Assignments not covered by the courses above outlined. Credit and hours to be arranged with individual students.

NOTE.—A breakage deposit is required of all students taking laboratory courses.

PHYSIOLOGY.

Professor SIMPSON.

1. **Physiology.** (4 Hrs.) A study of the functions of the different organs of the body, illustrated by demonstrations of human organs and those of lower animals, with a microscopic study of the most important tissues of the body. A laboratory period one afternoon each week will be given to the dissection of the cat and to the preparation of histological slides of the different organs.

First semester; M. W. F., 10:00; laboratory, W. 2:00 to 5:00.

17. **First Aid to the Injured.** (1 Hr.) A demonstrative lecture course in bandaging; care of the wounded; antidotes for poisons; etc. Intended to fit the student for all emergency cases.

Second semester; M. F., 10:00; Professor SIMPSON.

PHYSIOLOGICAL CHEMISTRY.

10. **Physiological Chemistry.** The course is divided into two portions, namely, ten weeks devoted to physical and descriptive chemistry and the remainder of the time devoted to the special chemistry of the tissues and of metabolism, including urinary analysis. This course is supplemented in the second semester by course 4. Required of all medical students. Prerequisites: organic chemistry and quantitative analysis.

First semester; section A, laboratory, M. Th., 8:00-12:00, S. 8:00-10:00; section B, laboratory, T. F., 8:00-12:00, S. 11:00-1:00; Lectures both sections W., 11:00-1:00; S., 10:00-11:00; Professor MORSE.

11. **Advanced Physiological Chemistry.** Elective for those who have completed course 6. A thesis, which must be accepted for publication by a journal of physiological research will be required for credit in this course.

8. **Seminar in Physiology and Physiological Chemistry.** Meetings will be held during the winter months at fortnightly intervals, in which special topics will be considered. Topic for 1921-22: Origin of the heart beat.

BACTERIOLOGY.

3. **Medical Bateriology.** (5 Hrs.) Preparation of culture media and study of pathogenic bacteria and their relation to disease, Bacteriologic examination of air, water, milk, foods, sputum, blood, etc. Isolation of bacteria from unknowns. Lectures, 36 hours, laboratory, 144 hours.

Second semester; lectures, M., 8:00, T., 11:00; laboratory, daily 8:00-10:00 or 10:00-12:00; Dr. SPRAY.

5. **Hygiene and Sanitation.** (2 Hrs.) Not open to freshmen. This course considers the principles of hygiene and sanitation as they pertain to the welfare of the individual and the care of the public health.

First semester; T. Th., 8:00; Professor ARKIN, M. B.

1. **Laboratory Diagnosis.** (2 Hrs.) A laboratory course in the chemical, microscopical, and bacteriological examination of urine, feces, blood, gastric contents, etc., and their pathologic and clinical significance.

Second semester; hours to be arranged; Professor ARKIN.

BOTANY.

Professor YORK.

6. **Pharmaceutical Botany.** (6 Hrs.) This course is designed primarily for those who wish to specialize in pharmacy. Three lecture periods and three three-hour laboratory periods each week.

First semester; M. W. F., 11:00; T. Th. S., 9:00-12:00.

7. **Pharmaceutical Botany.** (2 Hrs.) Continuation of course 6.

Second semester; M. W. F., 4:00.

THE SCHOOL OF MUSIC

STAFF OF INSTRUCTION.

FRANK BUTLER TROTTER, A.M., LL.D., *President of the University*

LOUIS BLACK, *Director and Head of the Vocal Department*

FLORA RAY HAYES, A.B., *Instructor in Theory and History of Music*

LYDIA IRENE HINKEL, Mus.B., *Instructor in Public School Music. Extension Work.*

ETHEL BORDEN BLACK, *Head of Piano Department*

GRACE MARTIN SNEE, B.M., *Instructor in Piano and Pipe Organ*

SUSAN MAXWELL MOORE, A. B., *Instructor in Piano*

MAX DONNER, *Instructor in Violin and Ensemble*

WALTER A. MESTREZAT, *Instructor in Wind Instruments*

LUCY BELTZHOOVER DILLE
ERNEST CLYDE BECKETT } *Assistants in Voice*

ALMA UNDERWOOD MARTIN
MILDRED LOUISE REED
GERTRUDE DAVISSON } *Student Assistants in Piano*

BUILDING AND EQUIPMENT.

The school is located on the Campus in a separate building containing five studios and class rooms, and five practice rooms.

The equipment consists of ten upright and six grand pianos, and a three manual tubular pneumatic pipe organ located in Commencement Hall.

CONCERTS AND RECITALS.

Faculty concerts are given at least three times a year, the last of the yearly series being the Commencement concert. All the members of the School of Music Faculty participate in these concerts, though occasionally one member may give an individual recital.

STUDENT CONCERTS.

A student's concert is given each week. These concerts vary in grade from elementary to graduate and post-graduate recitals. The object is to afford opportunity for the students to apply in public the proficiency that has been developed in the studio.

THE UNIVERSITY CHOIR.

This organization has been in existence for thirteen years under the present director. It is open to all students who can sing a part. Its principal function is to sing in the devotional exercises at Convocation each Wednesday. This gives the members a practical church choir experience.

During each year the choir appears in secular concerts and in special musical convocations.

THE UNIVERSITY PHILHARMONIC ORCHESTRA.

A University orchestra of thirty-five members, composed of students and outside talent, is constituted as follows:

First and second violins, violas, volincellos, contrabasses, flutes, oboes, trombones, drums, and all percussion instruments.

An average of four concerts will be given each year in which members of the faculty and advanced students in piano, violin, voice, organ and other departments can appear as soloists.

Rehearsals are held weekly. All advanced students in string and wind instruments are required to play in the orchestra and outside students of ability are also admitted on payment of a nominal fee.

Students in composition may have their works rehearsed and performed if found worthy, and students in conducting also have opportunity for actual practice.

This orchestra will afford the training and routine indispensable to the experienced orchestral player.

GENERAL ANNOUNCEMENTS.

Students may enter the School of Music at any time, but it is greatly to their interest to enter, as far as possible, at the beginning of the semester.

Students entering within the first two weeks of a semester will be charged for full semester; after that time, for the remainder of the semester and one week additional.

There is no deduction made for lessons missed by students except in case of prolonged illness, when the loss is divided equally between the student and the school.

Students of the School of Music are not allowed to take part in public programs or to join musical organizations without the consent of their respective teachers and the director of the school.

All music students are expected to attend the regular students' recitals, and to take part in them whenever so assigned, and to attend all concerts given under auspices of the University. They are expected to identify themselves with the various organizations of the school, and are required to enter any to which they are assigned by the director.

It is expected that all students will take sufficient work—literary or musical or both—to occupy their entire time.

CREDIT FOR MUSIC ON COLLEGE COURSES.

Credit towards the degree of Bachelor of Arts will be given for courses in the theory and the history of music, not to exceed fifteen semester hours.

COURSES OF STUDY.

The School of Music offers instruction in the following courses: voice, piano, violin, organ, public school music. In voice, piano, organ, and violin two courses are offered, one leading to a teachers' certificate, and one leading to an artist's diploma. The courses in public school music leads to a supervisor's certificate which exempts the holder from the state board examination.

REQUIREMENTS FOR ADMISSION.

No student can be classified in the collegiate course in music without passing an examination in solfeggio, or demonstrating to the satisfaction of the head of the department the ability to read music of moderate difficulty, and giving evidence of the mastery of the elements of music.

At least one year of piano is prerequisite to the public school music course.

In the preparatory course, to which children only are admitted no previous knowledge of music is required.

REQUIREMENTS FOR GRADUATION.

GENERAL REQUIREMENTS.

Candidates for a teacher's certificate in any of the four courses mentioned above must present a high school diploma or equivalent credits. They must also complete courses 1, 2, 3, 4, 5, 6, 7 and 8 in theory of music, and courses 5 and 6 in history of music or courses 9, 10, 11 and 12 in the appreciation of music, and show satisfactory proficiency in ensemble work.

Candidates for an artist's diploma must meet all the requirements imposed for the teacher's certificate and appear satisfactorily in a graduating recital.

VOICE.

Candidates for the teacher's certificate in voice, in addition to the above general requirements, must satisfactorily complete the three-year course in voice as outlined below, and must possess the ability to perform acceptably selections from the standard oratorios and operas. They must also complete one year of work in each of the modern languages—French, German and Italian, and two years of piano.

Candidates for the artist's diploma in voice must satisfy all the requirements for the teacher's certificates, and must complete the fourth year's work in voice.

PIANO.

Candidates for the teacher's certificate in piano, in addition to the general requirements, must satisfactorily complete the course outlined below for the elementary and intermediate grades. They must also complete the course in ensemble playing.

Candidates for the artist's diploma in piano must satisfy all the requirements for the teacher's certificate and must complete the work in piano outlined below for the advanced grade. A graduating recital must be given, part of which program shall consist of a standard concerto for piano-forte and orchestra.

VIOLIN.

Candidates for the teacher's certificate in violin must satisfactorily complete the three-year course in violin music as outlined below, including the concertos of Viotti, Rode and Kreutzer, and the lighter works of some modern composer. They must also have some knowledge of piano playing.

Candidates for the artist's diploma, in addition to the work required for the teacher's certificate, must complete the four years' work in violin music and give a graduating recital program including one sonata or concerto, one trio or quartet and solos.

PIPE ORGAN.

Candidates for teacher's certificate in organ, must satisfy all theoretical requirements for piano and the course in organ as outlined below.

Candidates for artist's diploma must satisfy all the requirements for the teachers's certificate and in addition must give a public recital, the program to include selections from the larger works of Bach, Mendelssohn, Guilmant, or Rheinberger Sonatas, and a group of more modern works.

NOTE.—Students desiring to become candidates for certificates or diplomas should note that while the above mentioned courses are referred to as three-year and four-year courses no definite period of time can be assigned for their completion. In all cases certificates and diplomas are awarded on the basis of the proficiency acquired, rather than on the length of time devoted to the course.

PUBLIC SCHOOL MUSIC.

Candidates for the supervisor's certificate in public school music must satisfactorily complete the course in public school music (96 hours) as indicated below. A high school diploma or equivalent credit is prerequisite.

The supervisor's certificate in public school music given by the University exempts the holder from examination by the State Board.

Required Courses (91 Hours.)

First Year Courses.		Second Year Courses.	
Sight Singing	6 hrs.	P. S. Methods	8 hrs.
Harmony	10 "	Practice Teaching	10 "
Piano	4 "	Music Appreciation	4 "
Voice	4 "	Education	6 "
Ear Training	6 "	Piano	2 "
Public Speaking	2 "	Voice	2 "

Third Year Courses.

Supervision	1 hr.
Practice Supervision	6 "
High School Music	1 "
History of Music	6 "
Orchestra Class	1 "
Violin Class	2 "
Ensemble	2 "
Piano	4 "
Voice	4 "

Electives (5 Hours).

Folk dancing, physical training, English, education or modern languages; others at the discretion of the instructor in public school music.

DEPARTMENTS OF INSTRUCTION.

Strict adherence to a fixed list of studies is not required. The needs of the individual student are considered and the studies varied accordingly. An idea of the work covered in the different classes may be obtained from the following:

VOICE.

Mr. BLACK.

First Grade—Technique; scales, arpeggios, etc.; vocalises, Panofka and Concone, Vacci and Marchesi. Simple songs in Italian and English.

Second Grade—Technique; scales, Lutgen, Concone, Lamperti, Panofka, etc. Songs in Italian and English. Ensemble; duets, trios and quartets.

Third Grade—Technique; Bona, Lutgen, Concone, Bordogni, etc. Arias from standard grand operas and oratorios. Ensemble.

Fourth Grade—Technique; Lamperti, Concone, Aprile, etc. Graduation recital program.

PIANO.

Mrs. BLACK, Miss MOORE, Mrs. SNEE.

Elementary. GRADE I. (a) Structure of the keyboard and fundamentals of notation. (b) Technic: all major scales, finger exercises; transposition of such exercises into familiar keys. (c) Studies and short pieces of the first grade by standard composers. (d) Ear training: pitch and rhythm of short melodic phrases. (e) Sight reading: simple duets for teacher and pupils.

GRADE II. (a) More advanced notation. (b) Technic: all major scales in parallel and contrary motion; minor scales in parallel motion; finger exercises; transposition of exercises into familiar keys. (c) Studies by Kohler, Loeschhorn and Heller; Little Preludes by Bach, sonatinas by Clementi and others; classical and romantic compositions of second grade. (d) Ear training: phrases in one and two voice-parts. (e) Sight reading: pieces of first grade; duets.

GRADE III. (a) Technic: all major and minor scales in parallel and contrary motion; two-octave arpeggios in triads, dominants and diminished seventh chords; finger exercises; transposition of exercises into various keys. (b) Studies such as Berens' Velocity Studies; Kuhlau and Clementi sonatinas, Schumann's Album for the Young, and miscellaneous compositions of third grade. (c) Ear training:

phrases in one to four voice parts. (d) Sight reading: pieces of second grade.

Intermediate. GRADE IV. (a) Technic: scales and arpeggios in all keys; scales in thirds; exercises for fingers, arm, pedals, etc.; transposition of exercises. (b) Studies such as Kramer's Fifty Studies (Schirmer edition), Czerny's Velocity Studies, Op. 299; two-voice inventions by Bach, sonatas by Haydn and Mozart, and miscellaneous compositions of fourth grade. (c) Ear training: phrases in two to four voice-parts. (d) Sight reading: pieces of third grade.

GRADE V. (a) Technic: arpeggios in extended positions; scales in thirds and sixths. (b) Kramer and Czerny studies continued; studies by Jensen and Haberbier; three-voice inventions by Bach, Beethoven's earlier sonatas, and miscellaneous compositions of fifth grade. (c) Ear training: phrases in four voice-parts. (d) Sight reading: sonatas by Clementi, Kuhlau, etc.

GRADE VI. (a) Technic: rapid scales and arpeggios; octave exercises; transpositions. (b) Studies such as Clementi's Gradus ad Parnassum, Czerny Op. 740; Bach's Well-Tempered Chlavichord, other Beethoven sonatas, sonatas by Weber, Grieg, Chopin, and miscellaneous compositions of sixth grade. (c) Ear training: more difficult phrases in four voice-parts. (d) Sight reading: simpler sonatas by Haydn and Mozart.

Advanced. GRADE VII. (a) Technic: complex and extended scales and arpeggios. (b) More difficult compositions by Beethoven, Chopin, Schumann and Liszt; piano concertos by Beethoven, Mozart, Mendelssohn and others; miscellaneous compositions of seventh grade.

Examinations in Piano.

All entering students, other than beginners, will be given an entrance examination to determine for which grade they are fitted.

All piano students will be examined at least twice a year, in January and in June, to determine the progress made.

PIANO SIGHT PLAYING.

Miss MOORE.

A class in piano sight reading is offered for those sufficiently advanced.

The work is arranged for classes of four or six, one hour per week and consists of rythmic scale work, transposition of simple hymn forms, study of the classics, such as overtures, quartettes and symphonies, and the study of modern compositions.

VIOLIN.

Mr. MAX DONNER.

Elementary. Scales and finger exercises. Schools and studies by Dancla, de Beriot, Keyser, Leonard Dont, etc.

Solos by de Beriot, David, Dancla, etc.

To pass from the elementary into the intermediate grade, a satisfactory performance of the Accolay Concerto No. 1 Am. is required.

Intermediate. Scales and arpeggi in three octaves. Studies by Kreutzer, Fiorillo, and Caprices by Rode.

Concertos and solos—Mozart E flat major; Viotti No. 22, 23; Kreutzer No. 19; Rode No. 7, 8; de Beriot No. 6, 7, 9; Beethoven Romances, etc.

Advanced Soloist Course. Scales and arpeggi in three octaves Studies and Caprices by Rode, Fiorillo, Kreutzer, Vieuxtemps, Ernest, Bach, and Paganini.

Concertos and Solos. Spohr 2nd and 8th; Viotti 22nd; Bach, Chaconne, Concerto in E. major; Wienawski 2nd; Mendelssohn, Burch, Beethoven, Vieuxtemps No. 5; Saint-Saens B minor, and Paganini.

NOTE—All advanced pupils are required to participate in the rehearsals of the orchestra, unless especially excused, and play in the Ensemble and String Quartet class.

PREPARATORY COURSES.

The School of Music offers well organized preparatory courses in piano and violin. The beginner's course has two lessons a week after school hours. Pupils generally remain in this course two years.

In the preparatory piano course a system of private and class lessons is used for all pupils. Experience has shown that much of the study necessary for a child's well-rounded musical development can be best done in classes. Rhythm, melody, ear-training, sight-reading and technic are included in the class work.

Pupils remain in this course until they have completed such studies as Berens' Velocity Studies, Loeschhorn's Thirty Melodious Studies, the easier Heller studies, Kuhlau and Clementi Sonatinas, Schumann's Album for the Young, and all major scales and arpeggios.

PIPE ORGAN.

Mrs. SNEE.

The organ course is extended to provide a thorough and complete preparation for the work of a church organist and accompanist.

A certain facility at the piano and in sight-reading is necessary before this work is taken up.

Stainer's Organ Primer, with special pedal studies and hymn playing comprise the preparatory work.

Rink's Organ School, Buck's studies in Phrasing and the works of Bach, Mendelssohn, Guilmant and Rheinberger comprise the groundwork of study through the course.

PUBLIC SCHOOL MUSIC.

Miss Hinkel.

1. **Sight Singing.** (3 Hrs.) This course is designed to meet the needs of students who are deficient in rhythm, intervals, scales, etc., and who are unable to read vocal music with facility.
First semester; M. T. Th., 11:00.

2. **Sight Reading and Melodic Diction** continued. (3 Hrs.)
Second semester; M. T. Th., 11:00.

3. **School Methods and Materials.** (4 Hrs.) Study of material and methods for teaching music in the kindergarten and primary grades; the application of the general principles of pedagogy to the teaching of music; music in correlation with other subjects in the curriculum; child voice.
First semester; M. T. Th. F., 10:00 A. M.

4. **School Methods and Materials.** (4 Hrs.) Study of materials and methods for teaching music in the intermediate grades; the application of the general priciples of pedagogy to the teaching of music; music in correlation with other subjects in the curriculum; the boy voice.
Second semester; M. T. Th. F., 10:00 A. M.

5. **High School Music.** (1 Hr.) The general subject of music in the high and junior high schools. Chorus conducting; orchestra; glee clubs; the arrangement of courses in harmony and appreciation of music for high schools; applied music study; credits for outside work, etc.
First semester; M., 9:00.

6. **Appreciation of Music.** (2 Hrs.) This course is designed as preparation for the teaching of the subject, as well as to meet the needs of all students interested in music. Study of masterpieces. The lectures will be illustrated by the instructor at the piano and by the use of the Victrola. This course does not presuppose a technical knowledge of music.
First semester; T. Th., 9:00.

7. **Appreciation of Music** continued. (2 Hrs.)
Second semester; T. Th., 9:00.

Additional Courses in Public School Music.

Ear Training. (6 Hrs.) This course is a study of the principles of tune and time based upon the recognition of these principles through the aural sense. Time to be arranged; Miss HAYES.

Violin Class. (2 Hrs.) This course is designed to give actual playing experience in violin in order to acquire efficiency in dealing with the problems of the school orchestra as well as in the organizing and conducting of violin classes. Time to be arranged; Mr. DONNER.

Orchestra Class. (1 Hr.) This course is a study of the different instruments of the orchestra, their timbre, compass, fingering, etc. Time to be arranged; Mr. DONNER.

Practice Teaching. (10 Hrs.) In this course students are required to teach the principles presented in Public School Methods Class, at the Seneca Public School, under the supervision of the instructor. Daily, Seneca School, 1:30 to 3:30.

Supervision. (1 Hr.) This course is a study of the factors that constitute the professional activities of the supervisor of music; the practical application of the supervisor's skill and training, not alone to the schoolroom, but to the needs of the entire community as a natural amplification of the school and its work. Friday, 9:00.

Practice Supervision. (6 Hrs.) This course is designed to give practice in the supervision of the grade teacher's work, including the making of monthly outlines, and the conducting of teachers' meetings for the purpose of presenting subject matter. The work in this course is carried on at Seneca Public School. Daily, Seneca School, 1:30 to 3:30.

History of Music—as already described in catalogue—to be a required subject.

Public Speaking. (1 Hr.) To be arranged by instructor in Public Speaking. Time to be arranged.

WOOD AND BRASS INSTRUMENTS.

Mr. MESTREZAT.

Opportunity is offered in this course to obtain the instruction necessary to fit one to play the various wood-wind and brass instruments used in orchestras and bands.

ENSEMBLE.

Mr. DONNER.

1. Lessons in Accompanying. This course is intended to furnish opportunity to advanced students to acquire the art of accompanying songs, violin and cello solos.

2. **Chamber Music.** The study of sonatas, trios and string quartets by Haydn, Mozart, Beethoven, Bach, Handel, Mendelssohn, Gade, Grieg, etc. Open to violinists, cellists, pianists and viola players. A preparatory class is also offered, the work to be studied including trios by Reinecke, Bohm, Haydn, Helmsberger, Schubert and Weber.

3. **Orchestra Music.** A study of the usual orchestral works and of accompaniments of pianoforte and violin concertos.

THEORY OF MUSIC.

Miss HAYES.

1. **Introductory Harmony and Harmonic Dictation.** (3 Hrs.) Keyboard Harmony. Prerequisite: At least one semester's work in piano.

Mon., Wed., Fri., Semester 1—9:00.

2. **Intermediate Harmony and Harmonic Dictation.** Keyboard Harmony. This work is a continuation of Music 1.

Mon., Wed., Fri., Semester 2—9:00.

3. **Advanced Harmony and Harmonic Dictation.** Keyboard Harmony. Prerequisites: Music 1 and 2.

Tues., Thurs., Semester 1—9:00.

4. **Advanced Harmony** (continued). Keyboard Harmony. Tues., Thurs., Semester 2—9:00.

6. **History of Music**—Classic Period.

Mon., Thurs., Semester 1—10:00.

6. **History of Music**—Classic Periods.

Mon., Thurs., Semester 2—10.00.

7. **History of Music**—Romantic Period.

Tues., Fri., Semester 1—10:00.

8. **History of Music**—Modern and Current Music.

Tues., Fri., Semester 2—10:00.

9. **Elementary Counterpoint. Prerequisites:** Music 1 and 2.

Mon., Wed., Fri., Semester 1—11:00.

10. **Advanced Counterpoint** (This is a continuation of Music 9.)

Mon., Wed., Fri., Semester 2—11:00.

11. **Analysis and Form** (Smaller Forms).

Tues., Thurs., Semester 1—11:00.

12. **Analysis and Form** (Larger Forms).

Tues., Thurs., Semester 2—11:00.

For Certificate. Piano, Voice, Violin, and Organ, Public School Music. Music 1, 2, 3, 4, 5, 6, 7, 8.

For Diploma. Piano, Voice, Violin, and Organ. Music 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12.

TUITION.

	Lessons per week		
Voice	One	Two	Three
Mr. Black	35.00	55.00	70.00
Mrs. Dille and Mr. Beckett	25.00	35.00	
Piano			
Mrs. Black	30.00	55.00	70.00
Mrs. Snee	20.00	30.00	
Miss Moore	20.00	30.00	
Elementary (Under 14 years)	15.00 a sem.		
Piano Sight Playing (Class of 4)	10.00		
Violin			
Mr. Donner			
Elementary	20.00	30.00	
Intermediate	25.00	35.00	
Advanced	25.00	40.00	
Orchestra Class (1 hr.)	5.00		
Pipe Organ			
Mrs. Snee	30.00	50.00	
Wood and Brass Instruments			
Mr. Mestrezat	14.00	20.00	
Ensemble			
Mr. Donner	20.00 a sem.		

Theory of Music (Miss Hayes)
Public School Music (Miss Hinkel) } $5.00 per semester hour.

Piano for practice, one hour a day, will be furnished at $6.00 a semester; two hours a day at $10.00 a semester; three hours a day at $14.00 a semester; four hours a day at $18.00 a semester.

Pipe organ practice, one hour a day, $10.00 a semester.

Students whose work is wholly in the School of Music pay only tuition.

Students who register in the School of Music and take University work not required in the music courses are subject to the usual University fees except the athletic fee.

SUMMER SCHOOL.

The University Summer School begins each year at the close of the second semester (about June 15) and lasts twelve weeks. Several members of the Music School Faculty are in residence for the first six weeks and offer courses of special interest to those students who can attend only in summer, for particular pains is taken to cover all the ground possible in six weeks and the courses of study are arranged with that end in view.

THE SUMMER SCHOOL

THE FACULTY.

FRANK BUTLER TROTTER, A.M., LL.D., President of the University

WAITMAN BARBE, A.M., LITT.D., Director of the Summer School and Professor of English in the University

ALFRED JARRETT HARE, A.M., Registrar.

HOWARD BUSHNELL ALLEN, M.S., Assistant Professor of Agricultural Education; *Agriculture*

CHARLES HENRY AMBLER, Ph.D., Professor of History; *History*

CHARLES CLAUDE ANDERSON, M.S., Assistant in Agricultural Education; *Agricultural Education*

EDGAR LEWIS ANDREWS, B.S.Agr., Associate Professor of Poultry Husbandry; *Poultry Husbandry*

ERNEST ANGELO, B. S. Agr., Instructor in Horticulture; *Horticulture*

ERNEST LEE ANTHONY, M. S., Professor of Dairy Husbandry, *Dairy Husbandry*

ROBERT ALLEN ARMSTRONG, A. M., L. H. D., Chaplain and Professor of English Language and Literature; *English*

LONNA DENNIS ARNETT, Ph. D., Librarian; *Library Science*

GEORGE RUSSELL BANCROFT, Ph. D., Associate Professor of Chemistry; *Chemistry*

ARTHUR G. BEACH, Ph. D., Professor of English, Marietta College; *English*

WILBUR L. BEAUCHAMP, A. M., Instructor in School of Education High School, University of Chicago; *Education*

ETHEL BORDEN BLACK, Instructor in Piano; *Piano*

LOUIS BLACK, Director of School of Music; *Voice*

GEORGE PAUL BOOMSLITER, M. S., Professor of Mechanics; *Mechanics*

ARTHUR TAYLOR BRAGONIER, B. S. C. E., Instructor in Surveying; *Surveying*

CHARLES L. BROADWATER, A. M., Principal Tyler County High School; *History*

CHARLES KEPLER BROWN, Assistant Director of Mining Extension; *Mining*

SAMUEL BOARDMAN BROWN, A. M., Professor of Geology and Mineralogy; *Geology and Mineralogy*

INEZ BROOKFIELD, Instructor in Hunter College for Teachers, New York City; *Education*

MARGARET BUCHANAN, A. M., Fellow in Mathematics in Bryn Mawr College; *Mathematics*

ALFRED COPELAND CALLEN, E. M., M. S., Professor of Mining Engineering; *Mining*

CHARLES BENTON CANNADAY, A. M., Professor of Latin; *Latin*

LORIMER VICTOR CAVINS, A. M., Professor of Education; *Education*

FLOYD EARLE CHIDESTER, Ph. D., Associate Professor of Zoology; *Zoology*

LEWIS H. CHRISMAN, A. M., Professor of English in West Virginia Wesleyan College; *English*

RACHEL HARTSHORN COLWELL, B. S., M. A., Professor of Home Economics; *Home Economics*

FERRIS DEWEY CORNELL, B. S., Agr., Instructor in Farm Engineering; *Farm Mechanics*

HARLEY LUCIUS CRANE, M. S., Agr., Associate Professor of Horticulture; *Horticulture*

ADAM CRAWFORD, Instructor in Mining Extension; *Mining*

MARGARET JANE CHAMBERS, B. S., Instructor in Home Economics; *Home Economics*

LENA M. CHARTER, B. S., Head of Department of Home Economics, North Texas State Normal College; *Home Economics*

EVANS ENGLE CRISWELL, Instructor in Mining Extension; *Mining*

PAUL RUSSELL CUTRIGHT, B. S., Assistant in Entomology; *Entomology*

ANDREW JACKSON DADISMAN, M. S., Agr., Associate Professor of Farm Economics; *Farm Economics*

EARL C. H. DAVIES, Ph. D., Associate Professor of Chemistry; *Chemistry*

JASPER NEWTON DEAHL, Ph. D., Professor of Education; *Education*

EUGENE PEYTON DEATRICK, Ph. D., Associate Professor of Soils; *Soils*

MAXWELL J. DORSEY, Ph. D., Professor of Horticulture; *Horticulture*

MAX DONNER, Instructor in Violin and Ensemble; *Violin and Ensemble*

CARRIE B. EDMONDSON, A. M., Elementary Supervisor, Social Motive School, New York City; *Education*

SADIE FITZGERALD, B. S., Instructor in Social Motive School, New York City; *Education*

ORFA REX FORD, B. S., Instructor in Physics; *Physics*

H. UBALD FOREST, Ph. D., Instructor in Romance Languages; *Romance Languages*

RALPH JOHN GARBER, B. S., M. S., Associate Professor of Agronomy; *Agronomy*

WILLIAM OLIVER GNAGEY, Instructor in Machine Shop Practice; *Machine Shop Practice*

JAMES HERBERT GILL, M. E., Professor of Machine Construction; *Machine Construction*

HARVEY CARSON GRUMBINE, Ph. D., Assistant Professor of English; *English*

THOMAS L. HARRIS, Ph. D., Professor of Sociology; *Sociology*

FLORA RAY HAYES, A. B., Instructor in Theory and History of Music; *Music*

LESLIE DAVID HAYES, B. S., M. E., Professor of Machine Design and Construction; *Mechanical Drawing*

H. M. HENRY, Ph. D., Dean and Professor of History, Emory and Henry College; *History*

HARRY ORAM HENDERSON, M. S., Assistant Professor of Dairy Husbandry; *Dairy Husbandry*

HUBERT HILL, M. S., Associate Professor of Chemistry; *Chemistry*

MARJORIE HILLAS, M. A., Director of Physical Education for Women in the University of Cincinnati; *Physical Education*

LYDIA IRENE HINKEL, B. Mus., Instructor in Public School Music; *Music*

JANE HINKLEY, Instructor in Home Economics, Parkersburg, West Virginia, City Schools; *Home Economics*

AVA HUGHES, New York City; *Education*

HARRY C. HUMPHREYS, A. M., Assistant Professor of Education: *Education*

LOUIS C. HUTSON, Instructor in Mining Extension; *Mining*

JOSEPH ELLIS HODGSON, Ph. D., Professor of Mathematics; *Mathematics*

DAVID DALE JOHNSON, A. M., Professor of English; *English*

FRED CHARLES KLASS, Instructor in Mining Extension; *Mining*

HARRY EDWARD KNOWLTON, B. S., Assistant Professor in Horticulture; *Horticulture*

FRANK H. LANE, A. M., Professor of Public Speaking in the University of Pittsburgh; *Public Speaking*

CHARLES ELMER LAWALL, E. M., Instructor in Mining Engineering; *Mining*

W. E. LEWIS, Instructor in Physical Education, Grafton, West Virginia, City Schools; *Physical Education*

JOHN HARWOOD LONGWELL, M. S. Agr., Assistant Professor of Animal Husbandry; *Animal Husbandry*

CLARA LYTLE, A. B., Instructor in English; *English*

EDWARD SILVER MACLIN, B. S., Edu., Professor of Industrial Education; *Education*

WILLIS E. MANEVAL, Ph. D., Associate Professor of Botany, University of Missouri; *Botany*

CORA M. MARTIN, A. M., Associate Professor of Education, North Texas State Normal School; *Education*

CHARLES MITRANI, M. A., Instructor in Romance Languages; *Romance Languages*

FRED A. MOLBY, Ph. D., Professor of Physics; *Physics*

ALLEN GUY MONTGOMERY, A. B., Instructor in Mathematics; *Mathematics*

SAMUEL MORRIS, Ph. D., Professor of Chemistry; *Chemistry*

SUSAN MAXWELL MOORE, A. B., Dean of Women and Instructor in Piano; *Piano*

ROY EZEKIEL NELSON, Instructor in Mining Engineering; *Mining*

WILLIAM NORRIS, Jr., Instructor in Mining Engineering; *Mining*

THEODORE E. ODLAND, M. S., Assistant Professor of Agronomy; *Agronomy*

ETHEL M. ORR, A. M., Horace Mann School, Teachers College Columbia University; *Education*

LEONARD MARION PEAIRS, B. S. Agr., Professor of Entomology; *Entomology*

PERLEY ISAAC REED, Ph. D., Assistant Professor of English; *English and Journalism*

CHARLES C. PETERS, Ph. D., Professor of Education in Ohio Wesleyan University; *Education*

HELEN PURINTON PETTIGREW, A. B., Instructor in English; *English*

REBECCA LUELLA POLLOCK, A. M., Assistant Professor of English; *English*

THOMAS H. QUEER, Instructor in Mining Extension; *Mining*

CLARENCE D. L. ROPP, A. B., Assistant in Chemistry; *Chemistry*

LOUIS AUGUST RUFENER, Ph. D., Associate Professor of Economics; *Sociology and Economics*

RAYMER EGBERT SEAMAN, Instructor in Woodworking and Foundry Practice; *Manual Training; Woodworking*

WILSON PORTER SHORTRIDGE, Ph. D., Professor of History in the University of Louisville; *History*

IRA WELLBORN SMITHEY, Ph. D., Instructor in Chemistry, *Chemistry*

GRACE MARTIN SNEE, B. M., Instructor in Piano and Pipe Organ; *Piano and Pipe Organ*

HERMAN DELOSS STILLMAN, Assistant in Woodworking; *Woodworking*

MADISON STATHERS, Ph. D., Professor of Romance Languages; *Romance Languages*

FREDERICK WILSON TRUSCOTT, Ph. D., Professor of Germanic Languages and Literature; *German*

RUFUS ASA WEST, Instructor in Metalworking; *Metalworking*

CHARLES HERMAN WINKLER, Ph. D., Professor of Agricultural Education; *Agricultural Education*

JOHN E. WINTER, Ph. D., Assistant Professor of Psychology; *Philosophy*

THOMAS JACKSON WOOFTER, A. M., LL. D., Dean of Peabody School of Education, University of Georgia; *Education*

SCHEDULE OF COURSES

NOTE—Courses marked with a dagger (†) will be given during the second term only.

Explanation of room designation:—W., Woodburn Hall; M., Martin Hall; S., Science Hall; L., Library; O. H., Oglebay Hall; M. H., Mechanical Hall; S. M., School of Music; C., Commencement Hall.

8:00 A. M.

Course, Title and Number.	Weeks	Hours Credit.	Instructor.	Room
Rural Organization (Agr. Edu. 50)	6	2	Anderson	O.H.
Farm Dairying (Dairy Hus. 21)	6	2	Anthony	O. H.
Floriculture (Hort. 30 S.)	6	2	Dorsey	O. H.
Farm Poultry (Poultry Hus. 1)	12	4	Andrews	O. H.
Physical Chemistry	6	2	Hill	37 S.
Money, Credit and Banking (Ec. 5S.)	6	2	Rufener	42 W.
†Labor Problems (Ec. 11 S)	6	2	Rufener	42 W.
Mech. of Materials (Mech. 71)	12	3	Boomsliter	M. H.
The Project Method (Edu. 51 S)	6	2	Peters	19 W.
†Education 23S.	6	2	Humphreys	17 W.
Rural Education (Edu. 54 S)	6	2	Woofter	18 W.
Teaching Gen. Science (Edu. 38S)	6	2	Beauchamp	16 M.
†Part-time Education (205)	6	2	Maclin	208 M. H.
Vocational Education (221)	6	2	Maclin	208 M. H.
Edu. Tests and Measurements 30S)	6	2	Cavins	16 W.
Method in Primary English (English 40 S)	6	2	Martin	20 S.
Methods in American History (Edu. 43 S)	6	2	Orr	29 W.
†Geography and Methods (Edu. 44 S)	6	2		20 S.
Composition and Rhetoric (Eng. 1 S)	6	2	Grumbine	24 W.
†The Editorial (English 79)	6	2	Reed	4 W.
†Composition and Rhetoric (English 2)	6	2	Johnson	24 W.
†Composition and Rhetoric (English 2 S)	6	2	Beach	32 W.
General Survey (English 27)	6	2	Pettigrew	32 W.
Shakespeare (English 28 S)	6	2	Armstrong	31 W.
Physical Geography (1)	6	2	Brown	11 M. H.
Elementary German (Ger. 1)	6	2	Truscott	14 M.
Modern European History (Hist. 14)	6	2	Broadwater	43 W.

Course, Title and Number.	Weeks	Hours Credit.	Instructor.	Room
American Social and Economic History (Hist. 9 S)	6	2	Henry	41 W.
†Reconstruction (Hist. 24 S)	6	2	Ambler	41 W.
Selection and Preparation of Foods (Home Ec. 61 S)	6	2	Hinkley	112 O. H.
First Year Latin (Latin A)	6	..	Cannaday	15 M.
Library Science	6	2	Arnett	L.
Elementary Algebra (Math. A)	12	½ unit	Buchanan	219 M. H.
College Algebra (Math. 3 S)	12	4	Hodgson	225 M. H.
Public School Music	6	¼ unit	Hinkel	S. M.
Introductory Physics (Physics 1)	6	3	Molby	20 M.
†Introductory Physics (Physics 3)	6	3	Molby	20 M.
†Introductory Physics (Physics ing 3)	6	2	Lane	16 M.
Conversation (French 34 S)	6	2	Mitrani	4 W.
†Anatomy of Vertebrates (Zoology 2)	6	4	Chidester	49 W.
8:30 A. M.				
†Organic Chemistry (Chem. 9 S)	6	5	Smithey	12 S.
8:30-11:00 A. M.				
Demonstration School—Miss Edmonson, Supervisor				W.
9:00 A. M.				
Introductory Animal Husbandry (Animal Hus. 40)	12	4	Livesay	O. H.
†Marketing Agricultural Products (Farm Ec. 7)	6	2	Dadisman	O. H.
Trees (Botany 24 S)	6	2	Maneval	309 O. H.
†General Bacteriology (Bot. 10 S)	6	2	Maneval	309 O. H.
Quan. Analysis (Chem. 18 S)	6	3	Hill	37 S.
Organic Chemistry (Chem, 16 S)	6	3	Bancroft	11 S.
Principles of Economics (Ec. 15S)	12	4	Rufener	42 W.
Rural Social Problems (Sociology 10 S)	6	2	Harris	45 W.
Statics (Mechanics 70)	12	3	Boomsliter	M. H.
Selection and Organization of Subject Matter, etc., (Edu. 10 S)	6	2	Deahl	17 W.
†History of American Education (Edu. 2 S)	6	2	Humphreys	17 W.
Educational Sociology (Edu. 5 S)	6	2	Woofter	18 W.
Industrial Education (201)	6	2	Maclin	208 M. H.
†Teaching Industrial Education (202)	6	2	Maclin	208 M. H.
Experimental Education (27 S)	12	4	Cavins	16 W.
English in Grades (41 S)	6	2	Martin	20 S.
Method in Arithmetic (42 S)	6	2	Orr	29 W.
†Child Literature, Language and Methods (Edu. 45 S)	6	2		20 S.
General Survey (English 26)	6	2	Lytle	30 W.

Course, Title and Number.	Weeks	Hours Credit.	Instructor.	Room
General Survey (English 27)	6	2	Armstrong	31 W.
†General Survey (English 27)	6	2	Chrisman	30 W.
Contemporary Drama (English 65 S)	6	2	Beach	32 W.
†The Essay (English 10 S)	6	2	Johnson	24 W.
†News Gathering and Writing (English 71)	6	2	Reed	32 W.
Goethe (German 10)	6	2	Truscott	14 W.
Municipal Gov. (Hist. 40 S)	6	2	Shortridge	20 L.
Political Parties (Hist. 9)	6	2	Broadwater	43 W.
Renaissance and Reformation (History 13)	6	2	Henry	41 W.
†Local and State Government (History 37 S)	6	2	Ambler	41 W.
†History 15 S or History 50 S)	6	2	Shortridge	20 L.
Caesar (Latin B)	6	..	Cannaday	15 M.
Plane Trigonometry (Math. 5 S)	6	2	Buchanan	219 M. H.
Plane Trigonometry (Math. 4 S)	6	2	Buchanan	219 M. H.
Plane and Spher. Trig. (Math. 6 S)	6	2	Buchanan	219 M. H.
Dif. and Int. Calculus (Math. 7 S)	12	..	Hodgson	225 M. H.
Public School Music	6	¼	unit Hinkel	8 S. M.
General Physics (Physics 6)	6	4	Molby	20 M.
†General Physics (Physics 8)	6	4	Molby	20 M.
†Art of Reading Aloud (Pub. Speaking 21)	6	2	Lane	16 M.
Elementary French (Fr. 1)	12	4	Forest	22 W.
Pronunciation for Teachers (Fr. 36 S)	6	2	Stathers	5 W.
Drama of 19th Cent. (Spanish 45)	6	2	Mitrani	4 W.
10:00 A. M.				
General Agriculture (Agr. Edu. A)	6	¼	unit Winkler	O. H.
Teaching of Vocational Agriculture (Agr. Edu. 36)	6	2	Allen	O. H.
Investment and Speculation (Econ. 21 S)	6	2	Rufener	42 W.
†Materials of Commerce (Econ. 24 S)	6	2	Rufener	42 W.
Supervision of Instruction (Edu. 11 S)	6	2	Deahl	17 W.
Experimental Education (Edu. 52)	6	2	Peters	19 W.
†Curriculum of Secondary Schools (Edu. 14 S)	6	2	Humphreys	17 W.
History of Education (Edu. 1 S)	6	2	Woofter	17 W.
Organization of Manual Training (212)	6	2	Maclin	208 M. H.
†Education 20 S or Education 7 S	6	2	Cavins	16 W.
How to Teach (Ed. 32 S)	6	2	Edmondson	29 W.
†Methods in American History (Education 43 S)	6	2		20 S.

Course, Title and Number.	Weeks	Hours Credit	Instructor.	Room
Child Literature, Language and Methods (Edu. 45 S)	6	2	Martin	20 S.
Composition and Rhetoric (Eng. 1 S)	6	2	Lytle	30 W.
General Survey (Eng. 26)	6	2	Pettigrew	32 W.
†American Literature (Eng. 68 S)	6	2	Chrisman	30 W.
Old Testament (English 36 S)	6	2	Armstrong	31 W.
†English Words (Eng. 17)	6	2	Johnson	24 W.
Psychology of Literature (English 61 S)	6	2	Grumbine	24 W.
General Geology (2)	6	2	Brown	111 M. H.
Elements of Sociology (Soc. 1 S)	6	2	Harris	45 W.
Introduction to Psychology (Philos. 1)	6	2	Winter	33 L.
Applied Design (Home Ec. 11 S)	6	2	Chambers	210 O. H.
Special Problems (Home Ec. 28 S)	6	2	Carter	208 O. H.
Novel and Short Story (German 18)	6	2	Truscott	14 M.
Review Course in American History (Hist. A)	6	¼ unit	Broadwater	43 W.
Formation of the Union (Hist. 22)	6	2	Henry	41 W.
Development of the West (Hist. 27)	6	2	Shortridge	20 L.
†Division and Reunion (Hist. 23 S)	6	2	Shortridge	20 L.
†Trans-Allegheny Frontier (Hist. 51)	6	2	Ambler	41 W.
Latin 1 or 3	6	2	Cannaday	15 M.
Analytic Geometry (Math. 5 S)	12	4	Buchanan	219 M. H.
Math. for Agriculture and General Science	12	..	Hodgson	225 M. H.
Public School Music	6	¼ unit	Hinkel	8 S. M.
Fiction 19th Cent. (French 3 S)	12	4	Mitrani	4 W.
Grammar and Composition (French 4)	6	2	Forest	22 W.
Conversation (Spanish 54 S)	6	2	Stathers	5 W.
11:00 A. M.				
General Botany (Botany 2 S)	12	4	Maneval	309 O. H.
Problems of Rural Education (Agricultural Edu. 40)	6	2	Winkler	O. H.
Milk Production (Dairy Hus.)	12	4	Anthony	O. H.
General Entomology (Ent. 1)	12	4	Peairs	O. H.
Inorganic Chemistry (Chem. 1 A. S.)	6	4	Morris	12 S.
†Inorganic Chemistry (Chem. 2 A. S.)	6	4	Davies	12 S.
Organic Chemistry (Chem. 20 S)	6	5	Bancroft	11 S.
Family and Child Welfare (Sociology 22 S)	6	2	Harris	45 W.
Kinetics (Mech. 72)	12	4	Boomsliter	M. H.
Education 6 or 15	6	2	Deahl	17 W.
Educational Hygiene (Edu. 15)	6	2	Peters	19 W.

Course, Title and Number.	Weeks	Hours Credit.	Instructor.	Room
Educational Tests and Measurements (Edu. 30 S)	6	2	Beauchamp	16 M.
Educational Data (26 S)	12	4	Cavins	16 W.
Moral Ed. (Philosophy 24 S)	6	2	Winter	33 L.
Geography and Methods (Edu. 44 S)	6	2	Orr	29 W.
Composition and Rhetoric (Eng. 1S)	6	2	Pettigrew	31 W.
†Composition and Rhetoric (Eng. 2 S)	6	2	Reed	32 W.
General Survey (Eng. 26)	6	2	Grumbine	24 W.
English Composition (Eng. 3)	6	2	Lytle	30 W.
Tennyson and Browning, (English 66 S)	6	2	Beach	32 W.
†Carlisle (Eng. 67 S)	6	2	Chrisman	30 W.
Teaching of English in Secondary Schools (Eng. 18)	6	2	Pollock	20 S.
General Mineralogy (6)	6	2	Brown	111 M. H.
Scientific German (German 19)	6	2	Truscott	14 M.
English Social and Industrial History (Hist. 19)	6	2	Shortridge	20 L.
†History of England (Hist. 18)	6	2	Shortridge	20 L.
Teaching of High School Latin (Latin 19 S)	6	2	Cannaday	15 M.
Nutrition of School Children (Home Ec. 23 S)	6	2	Colwell	208 O. H.
Plane Geometry (Math. B)	12	½ unit	Buchanan	219 O. H.
Solid Geometry (Math. 2 S)	12	4	Hodgson	225 M. H.
Public School Music	6	¼ unit	Hinkel	8 S. M.
†Effective Speaking (Pub. Speaking 12)	6	2	Lane	16 M.
France and the French (Fr. 5 S)	12	4	Forest	22 W.
The Novel in Spain (Spanish 43 S)	6	2	Stathers	5 W.
Machine Tool Work (En'g. 13)	6	..	Gill	101 M. H.
1:00 P. M.				
1:30 P. M.				
Selection and Preparation of Foods (Home Ec. 62 S)	6	2	Hinkley	112 O. H.
Elementary Clothing (Home Ec. 42 S)	6	2	Chambers	210 O. H.
Physics Laboratory (Physics 2)	6	1	Molby	21 M.
†Physics Laboratory (Physics 4)	6	1	Molby	21 M.
2:00 P. M.				
†Farm Records (Farm Ec. 8)	6	2	Dadisman	O. H.
Physical Education (A)	6	..	Lewis and—	Gym & Ar.
Physical Education (B)	6	¼ unit		Armory
3:00 P. M.				
Health Program (Physical Edu. A)	6	2	Lewis	Gym.

4:00 P. M.

Course, Title and Number.	Weeks	Hours Credit.	Instructor.	Room
†Argumentation (Pub. Sp. 14)	6	2	Lane	16 M.
Athletics Coaching (Physical Edu. B)	6	1	Lewis	Gym.
Physical Education (6)	6	..		Armory

8:15 P. M.

Music Recital and Vesper Services every Thursday first six weeks	C.

Hours to Be Arranged.

Research in Farm Crops (Agronomy 12)	6	..	Garber	O.H.
Farm Mechanics (27 S)	6	2	Cornell	O. H.
Soils	12	..	Detrick	O. H.
Mechanical Drawing	6	..	Hayes	213 M. H.
Empirical Design	6	..	Hayes	213 M. H.
Descriptive Geometry	6	..	Hayes	213 M. H.
Physical Education (E)	6	..		Armory
Woodworking	6	..	Seaman	203 M. H.
Pattern Making	6	..	Seaman	203 M. H.
Machine Construction	6	..	Gill	101 M. H.
Shop Methods	6	..	Gill	101 M. H.
Math. 17 S, Math. 9 S, Math. 12 S	12	..	Hodgson	225 M. H.
Anatomy, Neurology and Embryology	....	..	Morris	M. S.
Physiological Chemistry	....	..	Morse	M. S.
Mining	....	..	Callen & Brown	M. H.

Courses Which May Be Counted for Graduate Credit.

Agricultural Education 36; Allen; 10:00 o'clock.
Agronomy 12; Garber.
Animal Husbandry 49; Livesay.
Chemistry 20 S; Bancroft; 11:00 o'clock.
Dairy Husbandry 34; Anthony.
Economics 21 S; Rufener; 10:00 o'clock.
Education 10 S; Deahl; 9:00 o'clock.
Education 11 S; Deahl; 10:00 o'clock.
Education 6 or 15; Deahl; 11:00 o'clock.
Education 30 S; Cavins; 8:00 o'clock.
Education 5; Woofter; 9:00 o'clock.
Education 1; Woofter; 10:00 o'clock.
Education 52; Peters; 10:00 o'clock.
Education 26 S; Cavins; 11:00 o'clock.
Education 27 S; Cavins; 9:00 o'clock.
Education 20 S or 7 S; Cavins; 10:00 o'clock.
Education 2; Humphreys; 9:00 o'clock.
English 65 S; Beach; 9:00 o'clock.
English 66 S; Beach; 10:00 o'clock.

English 67 S; Chrisman; 11:00 o'clock.
English 68 S; Chrisman; 10:00 o'clock.
English 28 S; Armstrong; 8:00 o'clock.
English 10 S; Johnson; 9:00 o'clock.
English 61 S; Grumbine; 10:00 o'clock.
English 79; Reed; 11:00 o'clock.
History 13; Chitwood; 9:00 o'clock.
History 15 S or 50 S; Shortridge; 9:00 o'clock.
Horticulture 29; Dorsey.
Math. 17 S, or 9 S, or 12 S; Hodgson.
French 34 S; Mitrani; 8:00 o'clock.
French 36 S; Stathers; 9:00 o'clock.
Poultry Husbandry 10; Andrews.
Spanish 43 S; Stathers; 11:00 o'clock.
Spanish 54 S; Stathers; 10:00 o'clock.
Soils 4; Deatrick.

ANNOUNCEMENTS

LENGTH OF THE SESSION.

The twenty-fourth session of the Summer School of West Virginia University will begin Monday, June 12, and continue until the close of Saturday, August 26, 1922. It will be divided into two terms, June 12 to July 21 and July 24 to August 26; students may attend for the full session or for either of the short terms. The amount of college credit obtained for the full session is twelve hours and for either of the short terms six hours. The second six weeks term will be condensed into five weeks by holding classes on Saturdays.

Credit for nine weeks (9 hours) may be obtained by students who cannot remain for twelve weeks but who need to meet the requirements of the State Board of Education for the first-grade temporary certificate. Such students should make the fact known to their class officers. The order of the State Board of Education is as follows:

"In addition to having completed the standard four-year high school course, the applicant must secure additional credit for eight semester hours, four hours of which must be in professional subjects."

ADMISSION

There are no requirements for admission to the Summer School unless the student desires University credit for the work to be done. If he desires regular classification he must meet the regular University requirements for admission, a statement of which may be found in the University catalogue.

FEES

The fee for the Summer School, either for the full session or for either of the short terms, is $10.00 for resident students of West Virginia and $15.00 for non-residents. This fee covers matriculation, incidentals, and laboratory charges.

LIVING ACCOMMODATIONS

For Women.

Miss Susan Maxwell Moore, Dean of Women, has charge of the living accommodations for women students in the Summer School. Inquiries as to rooming and boarding should be addressed to her. It is desirable to engage living accommodations before coming to the Summer School.

Women students arriving in Morgantown in the daytime should go first to Woman's Parlor, Woodburn Hall, unless they have already made arrangements for their living accommodations; those arriving at night should go to Woman's Annex, 247 Willey Street, where they will be taken care of until permanent arrangements for them can be made. Street cars go directly from the railway stations to the Annex.

Rooms in Woman's Hall, according to location, cost $11, $12, or $13, per person, for six weeks; in the Annex, $7.50, $9, and $10.50. Table board is $6 per week. Meals are served in the dining hall of the Woman's Hall, which accommodates 300 persons. A deposit of $10.00 is required from all who desire to secure rooms either in the Woman's Hall or the Annex.

For Men.

In private homes room rent ranges from $2.00 to $2.50 a week. Board may be had in private boarding houses at $7.00 a week. Board and room together run from $9.00 to $10.00 a week. Men desiring accommodations should address Mr. W. J. Jones, Y. M. C. A., Morgantown, West Virginia, stating kind of place wanted, locality desired, and price they are willing to pay.

Prospective Summer School students are urged to write direct to either Miss Moore or Mr. Jones about rooming and boarding accommodations, rather than to the President of the University or to the Director of the Summer School.

FEATURES OF THE SUMMER SCHOOL

Among the chief features of the Summer School are these:

Regular College Courses in nearly all of the departments, and in many of the departments a large variety of courses. One-third of a year's work may be done in one summer session. Credit is also given for six weeks' work, and under certain conditions for nine weeks' work.

Regular and special courses for teachers, principals, supervisors, and superintendents, given by members of the faculty of the department of education assisted by a staff of specialists from other institutions. Among these courses will be a number of courses in the junior high school, and the high school.

Demonstration Department, under the supervision of Miss Edmondson. This department has been enlarged to include the junior high school. This demonstration school will, therefore, include classes of children in all of the elementary grades and the first year of the high school, the seventh, eighth and ninth years being organized into a junior high school. This department will continue through the first six weeks only.

Graduate Courses. An increased number and variety of graduate courses will be offered. Under a ruling of the faculty it is possible to secure a Master's degree by attending exclusively at the Summer sessions if so desired. All who are interested in graduate work should write to Dr. J. M. Callahan, Chairman of the Committee on Graduate Study.

CREDITS AND REPORTS

University credit may be had for nearly all of the Summer School courses. The amount of credit will be found stated after each course in these Announcements.

Only regularly matriculated students may use Summer School credits to count toward a degree at West Virginia University, but all others who do the work of the Summer School courses and take the examinations in them will receive reports of their grades to be used in any way they may like.

All grades, whether those of matriculated University students or of others, will be mailed to the students by the Registrar at the close of the twelve weeks course.

No statements or certificates will be given except those sent out from the Registrar's office. A single report from the Registrar's office will be sufficient for the "coupon of credit," institute attendance, college credit, and the like. This report will be sent to every student at the close of the Summer School.

VESPER SERVICES

The School of Music Faculty, under the direction of Louis Black, will give a series of weekly music recitals during the first six weeks of the session every Thursday at 8:15 o'clock p. m. These recitals will be free.

INFORMATION

For information concerning any department of the Summer School, write to the Director,

Professor WAITMAN BARBE, or to
FRANK B. TROTTER, LL.D., President of the University.

THE DIVISION OF MILITARY SCIENCE AND TACTICS

THE FACULTY.

FRANK BUTLER TROTTER, A.M., LL.D., *President of the University*

HARLAN L. MUMMA, Captain Infantry, United States Army, *Professor of Military Science and Tactics and Commandant of Cadets*

DONALD J. MYERS, Captain Infantry, D. O. L., United States Army, *Assistant Professor of Millitary Science and Tactics*

ARTHUR R. WHITNER, Captain Infantry, D. O. L., *Assistant Professor of Military Science and Tactics*

HELMER SWENHOLT, Captain of Engineers, *Assistant Professor of Military Science and Tactics and Commanding Officer of the Engineer Unit*

FRANK SIMA, Staff Sergeant, D. E. M. L. (Engineers), *Assistant to the Professor of Military Science and Tactics*

H. C. MYERS, Sergeant, D. E. M. L. (Infantry), *Assistant to the Professor of Military Science and Tactics*

HARLEY DEARBORN, Sergeant, D. E. M. L. (Infantry). *Assistant to the Professor of Military Science and Tactics*

West Virginia University being one of the beneficiaries of the Act of Congress of 1862, instruction in military tactics is made compulsory for the freshman and sophomore years.

The Division is in charge of an officer of the United States Army, detailed by the War Department, as professor of military science and tactics. The Cadet Corps is inspected once each year by an officer of the General staff of the Army and several times during each year by the R. O. T. C. inspector Fifth Corps area.

An Infantry Unit, Senior Division, of the Reserve Officers' Training Corps was established by the War Department on December 12, 1916. An engineer unit was established in 1919.

REQUIRED WORK IN MILITARY SCIENCE.

Extract from Chapter Forty-five of the Code of West Virginia.

Section 140. **Military Training.** Male students of suitable age in the university shall be required, under such regulations as the State Board of Education shall prescribe, to enroll in the department of military science. Said students shall serve for the time required by said regulations and shall be entitled to such special privileges and immunities as the State Board of Education may determine. The State Board of Education shall have authority to accept appropriations, material and other benefits from the Federal Government on account of any federal law providing for aid to the West Virginia University for giving instruction in military science and to co-operate as far as practicable with the Federal Government for such purpose.

Order of the State Board.

The following order has been adopted by the State Board of Education:

Ordered that all male students, with the exceptions hereinafter named, enroll themselves in the Division of Military Science and follow diligently the course of instruction provided therein. Proficiency in this course shall be required for graduation.

Practical and theoretical instruction shall be given four hours per week throughout the school year to all students except those in the advanced class who will be required to take five hours per week. A credit for one hour shall be given for each semester's work satisfactorily completed. Such credit shall be included in the computation of the student's standing at the end of each semester.

Every student enrolled in the Division of Military Science, shall at the time of his enlistment, deposit with the financial secretary of the University $10.00 to cover any loss or damage of books or government property occasioned through fault or neglect on the part of the cadet. This sum will be refunded to each cadet at expiration of the school term upon presentation to the financial secretary of a certificate of property clearance.

The following classes of students shall not be required to enroll themselves in the Military Division, but may elect to do so:

(1) All students who are citizens of a foreign country and do not intend to become citizens of the United States.

(2) All students who at date of entrance in the University are more than twenty-three years of age.

(3) All graduate students.

(4) All students whose studies are entirely in the School of Music.

(5) All students who are taking only the short course, or the special winter course, or agricultural extension work in the College of Agriculture.

(6) All students who are classified as juniors or seniors in the various colleges, and all who have completed two years' service in the military division.

(7) All students who are physically unable to perform military duty.

A board, to be known as the military and gymnasium board, shall be composed of the commandant of cadets, the director of physical training, and a surgeon of the corps of cadets, designated by the President. This board shall act upon claims for exemption from military service.

Students who claim exemption under any one of the first six cases must, within seven days after their registration in the University, present to the commandant, in writing, their request accompanied by such evidence as is relied upon to support the request. A failure to make the request within the stated time shall bar the student from claiming exemption.

Applicants for exemption on the ground of physical disability shall be carefully examined by a surgeon of the corps. A fee of one dollar to be paid to the examining surgeon shall be charged for such examination.

Students exempted under the seventh case shall, upon recommendation of the military and gymnasium board be required to register for such physical training as they can take until they have earned a credit equal to that given for the prescribed military work.

In none of the preceding cases shall the student absent himself until his application has been acted upon.

It shall be the duty of the commandant to notify the chairman of the committee on classification and grades whether the military and gymnasium board exempts a student or recommends that he be required to register for other work in place of military drill.

Whenever the cause for exemption shall no longer exist, it shall be the duty of the student to present himself for drill at the next drill period.

Students may appeal from the decision of the commandant of cadets or the military and gymnasium board, in which case the appeal shall be decided by the council of administration.

All cadet officers taking military instruction as an elective shall be, as to their tuition fees, on the same basis as state cadets.

Other Regulations Concerning Cadets.

A uniform for each cadet is furnished by the Government. The cadet is required to wear this uniform at drill.

Cadets who are bona fide residents of West Virginia are known as state cadets. A state cadet is allowed free stationery and the use of text books to the value of $10.00 a year. He pays no tuition fees to the University. If he graduates from any department of the University while a member of the cadets corps he is allowed to retain his text-books.

Cadets who are members of the military band receive the same allowances as State cadets.

Any cadet who is absent without leave for more than ten days will be dropped from the rolls of the division of Military Science. He cannot re-enter the University without special permission.

SPECIAL REWARDS FOR MILITARY EXCELLENCE.

The names of the most distinguished cadets of the graduating class are sent to the Adjutant General of the Army and to the Adjutant General of the State.

All graduates of the Military Division are eligible, within five years after graduation, to commissions as first lieutenants in the Organized Militia of the State, without examination.

The State Board of Regents offers the following medals as special rewards for excellence in military training:

(1) To the cadet having the highest record for shooting on the University Rifle team, a gold medal; (2) to the cadet having the second highest record for shooting on the University Rifle team, a silver medal; (3) To the cadet having the highest aggregate score at Company Team Rifle Competition, a gold medal; (To the cadet having the record for Military Training and Discipline, a gold medal; (5) To the cadet who shall write the best essay on preparation against war, fifty dollars.

Through the kindness of Mr. George C. Baker, of Morgantown, a prize of $15.00 in gold is offered to the best trained private in the corps and $10.00 for the second best private. Both the military record for the year and the marks in the competitive drills of commencement week will be used in determining the award.

ARMORY.

The Armory (60 by 120 feet) is used as a drill hall during inclement weather. This building is the home of the cadet corps, and all entertainments, given by them are held therein, under the supervision of the Commandant of Cadets.

MILITARY BAND.

A military band of sixty pieces is maintained as a part of the Cadet Corps. Band instruments are furnished by the Government and instruction is given in band music. Band cadets are also instructed in military drill to include the school of the soldier and of the squad.

ADMINISTRATION AND INSTRUCTION.

For the purpose of administration and drill the cadet corps is organized as a Battalion of infantry: Field, Staff, Band, and four companies.

The work in military science is taken in connection with other University work, and requires about four hours each week. The course of instruction is intended to fit all who graduate therein to perform efficiently the duties of officers in the Officers' Reserve Corps, the Organized Militia of West Virginia, or of volunteers. The winter months are devoted to theoretical instruction in tactics and other military subjects, together with practical instruction in drill and in gallery practice.

COURSES OF INSTRUCTION.

The following courses in military science and tactics are offered. All instruction is under the supervision of the commandant of cadets who is assisted by the senior cadet officers.

BASIC COURSE

First Year

Subjects and Scope

I. INFANTRY DRILL REGULATIONS 60%

No. Hrs.

17 1. **Theoretical Instruction:**

(a) Principles and methods of instruction in close and extended order to include the schools of the soldier, squad, platoon and company.

57 2. **Practical Instruction:**

(a) Close and Extended order drills.

(b) Participation in Military Ceremonies.

II. RIFLE MARKSMANSHIP 14%

5 1. **Theoretical Instruction:**

(a) Lectures and talks explanatory of the general scheme and principles of Rifle Marksmanship.

13 2. **Practical Instruction:**

(a) The first, second, third, fourth, and fifth steps in Rifle Marksmanship.

(b) Nomenclature and Care of the Rifle.

(c) Effect of Weather Conditions—sight changes —score book.

(d) Gallery practice.

(e) Method of coaching.

(f) General rules and definitions.

III. SCOUTING AND PATROLLING 8%

4 1. **Theoretical Instruction:**

(a) Principles governing the composition, formation, and operations of reconnoitering patrols by day and at night. Differences in methods of operating in open warfare and warfare of position.

7 2. **Practical Instruction:**

(a) Problems and Exercises in Scouting and Patrolling on sand table and terrain.

IV. PHYSICAL TRAINING 8%

12 1. **Practical Instruction:**

(a) Recruit Instruction in the setting-up exercises.

(b) Talks on the need for and object of Physical Training.

(c) Mass games and athletics.

(d) College athletics.

V. MILITARY COURTESY 4%

6 1. **Theoretical Instruction:**

(a) Lectures on Fundamental principles of Military discipline.

(b) Relation of courtesy to discipline and efficiency.

(c) The Military Courtesies of the Army of the United States.

(d) Demonstration of correct and incorrect manner of rendering courtesies.

ADDITIONAL INSTRUCTION 6%

(3)1. Individual Infantry Equipment. (1 Theo. & 2 Pract.)

7

(4)2. Interior Guard Duty. (2 Theo. & 2 Pract.)

128 Total number of hours. 100%

Second Year

Subject and Scope

I. MAP READING AND MILITARY SKETCHING 24%

No. Hrs.

10 1. **Theoretical Instruction:**

(a) The instruction necessary to enable students to read military maps with facility and to make road, out-post and position sketches.

20 2. **Practical Instruction:**

(a) Problems in map reading. Visibility of points, areas, et cetera.

(b) Practice in making road, outpost and position sketches.

(c) Combined sketching.

II. INFANTRY WEAPONS 31%

1. **Theoretical Instruction:**

(1). (a) The Bayonet—Lessons on the bayonet as an offensive weapon. The spirit of the Bayonet. Team work.

11 (9). (b) The Automatic Rifle—Lessons on the history, characteristics, marksmanship of the weapon and the organization and equipment of auto-riflemen.

(1). (c) Hand and Rifle Grenades. Lessons on the construction and handling of the weapons, including explosives.

2. **Practical Instruction:**

(14). (a) The Bayonet—Bayonet training to include the assault course.

30 (12). (b) Automatic Rifle—Mechanics (stripping, assembling, functioning). Immediate action. marksmanship to include instruction up to range practice.

(4). (c) Hand and Rifle Grenades—Individual instruction with dummy and improvised grenades.

III. MUSKETRY 25%

18 1. **Theoretical Instruction:**

(a) Weapons of the Infantry squad. Theory of fire.

(b) Range estimation, target designation, fire distribution.

(c) Fire discipline (use of cover, individual movement, transmission of firing data, signals, replacement of casualties, individual conduct, et cetera.)

(d) Fire control (application, observation and adjustment of fire.)

(e) Control of movement (rushes and infiltration, squad and section).

(f) Conduct of fire in the attack. Duties of leaders to include the section.

(g) Conduct of fire in the defense. Duties of leaders to include the section.
(h) Combat practice (use of landscape targets, preparation and methods of conducting and criticising practical exercises).

13. 2. **Practical Instruction:**
(a) Exercises, demonstrations and tests, using sand table, landscape target and terrain.

IV. COMMAND AND LEADERSHIP 14%

19 1. **Practical Instruction and Experience:**
(a) In order to carry out the spirit of the General Instructions governing this course, it is essential that students in the second year of the Basic Course be given the greatest practicable opportunity to exercise the functions of command appropriate to N. C. O.'s and to acquire practical experience in leadership. A provision of time is made for this purpose and professors of military science and tactics will arrange in the most practicable manner to give the individual student definite assignments to duties in connection with the instruction and training of students in the first year of the Basic Course which will, in the course of a year, demonstrate the aptitude of the individual student.

V. MILITARY HYGIENE, SANITATION, AND FIRST AID 6%

6 1. **Theoretical Instruction:**
(a) Personal Hygiene.
(b) Foods, their preparation. Hygiene of the kitchen, the barracks and camp.
(c) Selection and protection of drinking water.
(d) Hygiene of moving troops.
(e) The causes of disease. The prevention and control of epidemics. The prevention of mental and nervous diseases.
(f) Sanitation of localities, selection and drainage of camp sites.
(g) Disposal of refuse.
(h) First aid to the injured. Resuscitations.
(i) So much as is necessary for an intelligent understanding of the fundamental importance of physical, mental and moral soundness in the soldier. Physical requirements for military service.
(j) Comparative statistics of physical fitness of American citizens for military service in the World War.

1 2. **Practical Instruction:**
(a) Sand table demonstrations and problems in camp sanitation.
(b) Construction of miniature models of sanitary appliances, camp sites, expedients, et cetera.
(c) Demonstrations and exercises in First Aid to the Injured.

128 Total Number of Hours. 100%

ENGINEER SPECIAL

Subject.	Theory Hrs.	Practice Hrs.
14. Military Map Making and Map Reading		12
15. Organization	4	
16. Military Bridges and River Crossings	6	
17. Fortification	6	
Camouflage		
Trenchfire and Communication		
Accessories, Revetment, Observation Posts, etc.		
Machine Gun emplacements		
Obstacles		
Shelter		
Organization of the Ground		
18. Roads and Communications, Opening up New Communications, Repair of Worn and Shell Torn Roads	8	
Totals	24	12—Grand Total 36

ADVANCED COURSE

First Year

Subjects and Scope

I. FIELD ENGINEERING 40%

No. Hrs.

37 1. **Theoretical Instruction:**

(a) Elements of Field Engineering. Instruction to include the priciples and methods of Military field engineering in the various types of trenches, obstacles, shelters, machine-gun emplacements, observation posts, et cetera. Organization of working parties and tasks. Selection of location for works of defense. Concealment and camouflage.

25 2. **Practical Instruction:**

(a) Solution of Military Engineering problems based on 1 (a) above. Demonstrations on sand table. Construction on said table of miniature modern types of trenches, obstacles and other defensive works. Reconnaissance, location and laying out of works on the ground. (Where practicable, a trench system should be constructed. Each class, from year to year, enlarging, improving and repairing the initial works.).

II. ACCOMPANYING WEAPONS 30%

1. **Theoretical Instruction:**

(11). (a) The Machine Gun—Development of the Machine Gun. The Theory of Fire. Targets and Ranges. Direct, indirect and overhead fire, and night firing.

19 (4). (b) The 37mm Gun (one pounder)—History of the weapon. Direct, indirect and overhead fire. Observation and adjustment of fire.

(4). (c) The Light Mortar—History of the Weapon. Laying the Mortar. Kinds of fire. Observation and adjustment of fire.

2. **Practical Instruction:**

(16). (a) The Machine Gun—Nomenclature, use, care and repair of machine guns and accessories. Mechanics (stripping, assembling, functioning). Immediate action. Exercises and demonstrations in direct and indirect fire. Use of instruments. Determination of ranges. Recognition and designation of service targets.

3 (7). (b) The 37 mm Gun, (one pounder)—Mechanics (stripping, assembling, functioning). Construction, care and operation of the gun. Types of ammunition. School of the one-pounder section. Exercises and demonstrations in direct and indirect fire.

(7). (c) The Light Mortar—Construction, care and operation of the gun. Mechanics (stripping, assembling, functioning of the gun. Assembling and functioning of bombs.). Light mortar emplacements. School of the Mortar Section.

III. MILITARY LAW AND RULES OF LAND WARFARE.... 10%

12 1. **Theoretical Instruction:**

(a) Military Law—Definition. Sources and kinds of Military jurisdiction. Classification and composition of Courts-Martial. Exercise of military jurisdiction. Persons subject to Military Law. Articles of War explained. Procedure before trial. Procedure of Courts-Martial. Evidence. Sentences. Punishment without trial.

(b) Rules of land warfare. Lectures on general principles.

2 2. **Practical Instruction:**

(a) Moot-Court exercises.

IV. COMMAND AND LEADERSHIP 20%

30 1. **Practical Instruction and Experience:**

(a) (See comment under IV-1 (a) in 2nd year of Basic Course except that instruction should be appropriate to grades of sergeant and lieutenant.).

157 Total Number of Hours. 100%

ENGINEER SPECIAL

Subject.	Theory Hrs.	Practice Hrs.
9. Military Map Making and Map Reading		12
10. Light Railways	4	
Location, Construction, Maintenance Operation		
11. Explosives, Demolitions and Mine Warfare	4	
12. Fortifications	16	
13. Academic Engineering Courses of Military Value	72	
Totals	96	12—Grand Total 108

ADVANCED COURSE

Second Year
Subjects and Scope

I. TACTICS 55%

No. Hrs.

47 1. **Theoretical Instruction:**
- (a) General view of the organization and conduct of the Batallion and higher units.
- (b) Principles governing the organization, armament, equipment and conduct of the rifle, machine gun, howitzer, and headquarters companies, in offensive and defensive combat.
- (c) Tactical priciples governing the conduct of the platoon and smaller units in offensive and defensive combat. Details of organization, equipment and tactical employment of the rifle company, machine gun company and howitzer company platoons. Combined action.
- (d) Principals governing the employment and details of conduct of covering detachments in open and position warfare.

NOTE: (b) should be treated in a definite and (c) in a detailed manner.

40 2. **Practical Instruction:**
- (a) Demonstrations, exercises and problems on sand table, map and terrain in subjects covered in (b), (c), and (d) above.

II. MILITARY HISTORY 13%

22 1. Facts of American Militarv History including the World War as to:
- (a) The sources of authority for our Military Establishment.
- (b) The development of the Military resources and the Military strength of the United States.
- (c) The state of national preparedness for War at critical periods in the History of the United States.
- (d) The cost of American wars in relation to national unpreparedness.

2. Lessons from American Military History as to:
(a) The traditional military policy of the United States.
(b) The need for national organization for the Military defense of the nation.

III. ADMINISTRATION 12%

12 1. Lectures on the practical administration of a company including interior economy and the management of the soldier.

8 2. Practical work in the preparation of papers pertaining to the administration of a company. So much as a lieutenant should know concerning military correspondence, preparation and application of War Department forms, use and disposition of orders, bulletins, and circulars.

IV. COMMAND AND LEADERSHIP 20%

28 1. **Practical Instruction and Experience:**
(See comment under IV, 1 (a) in 2nd year of Basic Course except that instruction should be appropriate to grades of sergeant and lieutenant.)

157 Total Number of Hours. 100%

ENGINEER SPECIAL

Subject.	Theory Hrs.	Practice Hrs.
9. Military Map Making and Map Reading		12
10. Functions and Staff Relations of Engineers with Particular Relations to Special Engineer Services	4	
11. Map Problems Involving Engineer Problems encountered during war	7	
12. Terrain Exercises involving Enneer Problems encountered during war		8
13. Organization and Administration of Engineering projects	1	
14. Thesis on Military Engineering subjects	4	
15. Academic Engineering Courses of Military Value	72	
Total	88	20—Grand Total 108

DEGREES, DIPLOMAS AND PRIZES

Fifty-fourth Annual Commencement, June 13, 1921.

CANDIDATES FOR DEGREES

1921

MASTER OF ARTS

DAVID ALFRED CHRISTOPHER . . . . . MORGANTOWN
A. B., West Virginia University, 1918

ELLEN ANNA MATTSON . . . . . MORGANTOWN
A. B., West Virginia University, 1915

ALLEN GUY MONTGOMERY . . . . . MORGANTOWN
A. B., West Virginia University, 1917

HELEN PURINTON PETTIGREW . . . . MORGANTOWN
A. B., West Virginia University, 1913

JOHN HENRY ROHRBAUGH . . . . . FARMINGTON
B. S., Davis and Elkins College

MASTER OF SCIENCE

CHARLES CLAUDE ANDERSON . . . . MORGANTOWN
B. S., Berea College, 1913

CHARLES LESTER LAZZELL . . . . . MORGANTOWN
A. B., West Virginia University, 1918

MECHANICAL ENGINEER

THOMAS SHAFFER PATTERSON . . . . STATE COLLEGE, PA.
B. S. M. E., West Virginia University, 1910

BACHELOR OF ARTS

CLAIRE BURNS BAILEY . . . . . MORGANTOWN
GRACE ELLIOTT BAKER . . . . . MORGANTOWN
MILDRED JOY BARKER . . . . . MORGANTOWN
HELEN VIRGINIA BARNS . . . . . MORGANTOWN
MARY HODGES BARNS . . . . . MORGANTOWN
CHARLOTTE ELIZABETH BERRYMAN . . BLUEFIELD
ANNA MABEL BOLTON . . . . . MORGANTOWN
STERLING BODINE BOTTOME . . . . . MOUNDSVILLE
HELEN WALTERS BOWERS . . . . . WHEELING
BONNIE LYNNE BOYLES . . . . . CLARKSBURG
LINN MAPEL BRANNON . . . . . WESTON

HERBERT WHITTAKER BRIGGS	MORGANTOWN
THEODORE VERNE BROADWATER	BELINGTON
EMMA LOUISE BROWN	MORGANTOWN
WILLIAM EMMETT BUCKEY	FAIRMONT
MAUDE MARIE BURLEY	DAVIS
JAMES FRANCIS BURN	FAIRMONT
BERDA LYNCH BUTLER	HUNTINGTON
ELSIE DOROTHY CARLE	WHEELING
ANNA AGNES CAWLEY	SISTERSVILLE
AGNES CADY CHITWOOD	MORGANTOWN
ANAGRACE BELL COCHRAN	MORGANTOWN
CREDE HAYMOND CONLEY	CLARKSBURG
MALISSA LOUISE CROWL	FAIRMONT
HUGH RAYMOND CUMMINGS	WELLSBURG
PAUL RUSSELL CUTRIGHT	ADRIAN
GRATTAN MITCHELL DAUGHERTY	HINTON
NETTIE DAWKINS	SANDYVILLE
MABEL TAYLOR DYE	MINERAL WELLS
HARVEY EARL FEAR	FAIRMONT
OLAN DEWITT FEAR	FAIRMONT
FRANCES ELIZABETH FURBEE	MANNINGTON
EVA ELEANOR GALLAGHER	NEW CUMBERLAND
WILLIAM JAMES GRAY	MOUNT HOPE
CLAY DUCKWORTH HAMMOND	WEST UNION
JOSEPHINE HANFORD	MORGANTOWN
DUNCAN CLAIRE HARKINS	MORGANTOWN
WARD WAYNE HIBBS	MANNINGTON
NELLE MILDRED HOCK	BLUEFIELD
SARAH EMMA HUTCHINSON	CAMERON
RICHARD ELKINS HYDE	MARTINSBURG
LUCY ELEANOR JONES	SMITHTON
ARDAFAY CLARA KELLY	SUTERSVILLE, PA.
ETHEL GERTRUDE KEYSER	BECKLEY
CORA ELEANOR KINCADE	FAIRMONT
ORR RUFUS KING	WESTON
GRACE ALICE MARTIN	SHINNSTON
MILDRED MCCASKEY	NEW MARTINSVILLE
JOHN PETER MCDERMOTT	CAMERON
VERDA BLANCHE MCDONALD	MORGANTOWN
CLEMENT ANTHONY MCMURRER	CHARLESTON
CORA MEREDITH	MORGANTOWN
CHARLES DONHAM MINOR	MORGANTOWN
CHARLES EDGAR MOORE	POINT MARION, PA.
MARTHA MARGARET MOORE	WEST ALEXANDER, PA.
EMMA FRANCES MYERS	SUMMERSVILLE

Charles Thompson Neff, Jr.	Piedmont
William Elliott Nefflen	Keyser
Grace Fleming Payne	Hedgesville
Forrest Blanchard Poling	Philippi
George Fleming Randall	Shinnston
Benjamin Garnet Reeder	Salem
Kathryn Suit Reynolds	Keyser
Vivian Gordon Reynolds	Grafton
Hugh Dillard Riddle	Davis
Emily Esther Riggs	Morgantown
Frances Mildred Riggs	Morgantown
Margaret Neville Rogers	Morgantown
Clarence Daniel Luther Ropp	Martinsburg
Grace Elinore Scott	Morgantown
William Brown Shirey	Union
Allie Pauline Shriver	Morgantown
Lucy Adline Shuttleworth	Morgantown
Wayne Stacy Shuttleworth	Fairmont
Georgina Smith	Morgantown
Uneva Smith	Morgantown
Virginia Ruhamah Snyder	Morgantown
Frances Norton Stealey	Clarksburg
Merrie Marguerite Stewart	Morgantown
Edith Stevens	Metz
Malden Dallas Stout	Clarksburg
Esker Wayne Talbott	Philippi
Helen Elisabeth Tarr	Morgantown
Douglas Christian Tomkies	Hinton
Rachel Tuckwiller	Lewisburg
Russell Dwight Van Gilder	Morgantown
Clara Belle Watson	Morgantown
Mary Rebecca Werninger	Huntington
Katharine Rosalie White	Richwood
Katharyn Wilt	Elkins
Edith Lorraine Wilmoth	Elkins
Elizabeth Madoline Worley	Salem
Frank Lloyd Yates	Charles Town

BACHELOR OF SCIENCE

(Major in Medicine)

Daniel Newman Barber	Charleston
John McLaughlin Brewster	Weston
William Preston Burton	Matoaka
Hyman Cantor	Pittsburgh, Pa.

DANIEL GILBERT CAUDY . . . . . CAMDEN-ON-GAULEY
ROGER EVERHART CLAPHAM . . . . . MARTINSBURG
WESLEY FRANKLIN DORSEY . . . . . MOUNT LOOKOUT
LIBORIO FIGUEROA . . . . . HUMACAO, P. R.
DEWEY LINWOOD FLESHMAN . . . . PENCE SPRINGS
RAY IRA FRAME . . . . . SUTTON
THEODORE CLIFTON GIFFIN . . . . . ROWLESBURG
THOMAS VINCENT GOCKE . . . . . PIEDMONT
JAMES FRANKLIN HAYS . . . . . WESTON
GEORGE RALPH MAXWELL . . . . . MORGANTOWN
CARLTON SAMUEL MCCULLOUGH . . . . BURGETTSTOWN, PA.
RALEIGH PHILLIP MOLER . . . . . HARPER'S FERRY
ANTHONY CARMEN MONTANI . . . . YOUNGSTOWN, OHIO
KARL JOHNSON MYERS . . . . . PHILIPPI
WARD EDWIN NEWCOMER . . . . . MCCLELLANDTOWN, PA.
CECIL BENJAMIN PRIDE . . . . . FAIRMONT
PARRY MASON SCOTT . . . . . MORGANTOWN
SYLVIA BARNES SAURBOURNE . . . . BRIDGEPORT
LEO EDWARD STENGER . . . . . MORGANTOWN
WILLIAM JACOB STUTZ . . . . . NEW CASTLE, PA.
WILLIAM WALLACE WALKER . . . . . WINONA
WILLIAM ARCHIBALD WELTON . . . . PETERSBURG
RAY HUNTER WHARTON . . . . . NEW MARTINSVILLE
JAMES FRANKLIN WHITE . . . . . MORGANTOWN

BACHELOR OF LAWS

CHARLES BOGER AHRENS . . . . . WHEELING
HARRY RAYMOND CRONIN . . . . . FAIRMONT
A. B., West Virginia University, 1920
RUSSELL LOGAN FURBEE . . . . . MANNINGTON
WILLIAM ELLSWORTH GLASSCOCK, JR. . MORGANTOWN
RALPH MCCLUNG HINER . . . . . FRANKLIN
WENDEL WEBSTER HOOVER . . . . . WEBSTER SPRINGS
A. B., West Virginia University, 1920
JOHN COGLEY HOPKINS . . . . . CAMERON
ALBERT WILLIAM LAAS . . . . . BENWOOD
STANLEY CLARENCE MORRIS . . . . . MORGANTOWN
A. B., Marietta College, 1914
CLARENCE ROBEY . . . . . PETERSBURG
A. B., West Virginia University, 1919
JOSEPH MCDONALD SANDERS, JR. . . . BLUEFIELD
CLYDE WILLIAM WELLEN . . . . . MORGANTOWN
A. B., West Virginia University, 1918

BACHELOR OF SCIENCE IN CIVIL ENGINEERING

DONALD EDWARD CONAWAY . . . . . MORGANTOWN
JASPER ALDEN WORCESTER DAVIS . . . BEVERLY, MASS.

Cecil Harold Graham . . . . . Mount Hope
James Samuel Juergens . . . . . Sutton
Roy Ezekiel Nelson . . . . . Independence
Charles Wesley McDowell . . . . Morgantown
Elmer Woodward Prince . . . . . Morgantown

BACHELOR OF SCIENCE IN ELECTRICAL ENGINEERING

John Maurice Frum . . . . . Rosemont
Charles Nash Harman . . . . . New Martinsville
Henry McColloch McLain . . . . Elm Grove
Robert Emmett Mullen . . . . . Huntington
Ralph Lin Sheffer . . . . . Huntington
Paul Harrison Sommer . . . . . Sutton
Max Wellman Wilcoxen . . . . . Huntington

BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING

William Leps Burdette . . . . . Lewisburg
John Jarrett Knight . . . . . Clarksburg
Alvin Martin Miller . . . . . Jeannette, Pa.
Russell Heavner Twyman . . . . . Clarksburg

BACHELOR OF SCIENCE IN ENGINEERING OF MINES

Charles Russell Bickel . . . . . Parkersburg
William F. Knode . . . . . Fairview
Forest Hunter Neely . . . . . Fairmont
Otis Gayle Stewart . . . . . Clarksburg
Russell Woods Wilmoth . . . . . Elkins

BACHELOR OF SCIENCE IN CHEMICAL ENGINEERING

Benjamin Preiser . . . . . Moundsville
Louis Frederick Warrick . . . . . Morgantown

BACHELOR OF SCIENCE IN INDUSTRIAL ENGINEERING

Noah Franklin Stump . . . . . Yoe, Pa.

BACHELOR OF SCIENCE

(Engineering Electives)

George Washington Prove . . . . Elkton, Va.

BACHELOR OF SCIENCE IN AGRICULTURE

Harvey Clark Bailey . . . . . Morgantown
Carl Roush Bibbee . . . . . Hanna
Paul Cecil Bibbee . . . . . Hanna
Harvey Bird Bowman . . . . . Wheeling
Frederick Arthur Bradley . . . . Grafton

ALLEN ARTHUR BROOKS . . . . . BUCKHANNON
JAMES CARL COX . . . . . COX'S MILLS
LLOYD CHARLES FURBEE . . . . . RAVENSWOOD
FORREST NELSON GOODING . . . . . TERRA ALTA
EUGENE ASHBY GROW . . . . . WILLIAMSTOWN
GOLDAN ORLANDO HALL . . . . . PARKERSBURG
ERNEST EVERETT HIGGS . . . . . CHARLES TOWN
HICKORY CLAY HUTCHINSON . . . . RAVENSWOOD
DENNIS ISON LAW . . . . . CAIRO
CHARLES MELVIN LOUGH . . . . . WHEELING
B. S., West Virginia University, 1911
WYATTE NELSON MCCLUNG . . . . . RUPERT
CYRUS HAYMOND MAXWELL, JR. . . . . MORGANTOWN
PAUL EWALD NEFFLEN . . . . . ELKINS
MCDOWELL PANCAKE . . . . . ROMNEY
RICHARD FRANKLIN PAYNE . . . . . PHILIPPI
JAMES HARVEY SHAFFER . . . . . MORGANTOWN
HOWARD CARROLLTON SMITH . . . . GRAFTON
SHIRLEY LELAND STARKEY . . . . . RAVENSWOOD
HARRY GAIL STURM . . . . . ENTERPRISE
RAY SPENCER THORNTON . . . . . PRINCETON

ELECTIONS TO PHI BETA KAPPA.

CHARLOTTE ELIZABETH BERRYMAN
STERLING BODINE BOTTOME
WILLIAM EMMET BUCKEY
ANNA AGNES CAWLEY
AGNES CADY CHITWOOD
ANAGRACE BELL COCHRANE
DUNCAN CLAIRE HARKINS
NELLE MILDRED HOCK
RICHARD ELKINS HYDE
MARTHA MARGARET MOORE
VIVIAN GORDON REYNOLDS
CLARENCE DANIEL LUTHER ROPP
RACHEL TUCKWILLER

ADDRESS LIST OF FACULTY AND STAFF

NOTE: The date following the name indicates the year of appointment of the present position. When a second date is given it indicates the year of first appointment on the University staff. The telephone number follows the Morgantown street address.

Abbott, Elizabeth B.; Matron of the Woman's Hall; 1919; Woman's Hall; 516R.

Addair, John, Student Assistant in Zoology; 1921; 522 University Driveway; 596W.

Allen, Howard Bushnell, M.S. (Cornell, 1920); Assistant Professor of Agricultural Education; 1920; 11 West High Street; 1089W.

Ambler, Charles Henry Ph.D (Wisconsin, 1908); Professor of History; 1920; 1917; 446 Spruce Street; 970J.

Ammons, Nellie Perrel, A.B. (W. V. U., 1917); Instructor in Botany; 1920; 547 Front Street; 221M.

Anderson, Charles Claude, M.S. (W. V. U., 1921); Assistant Professor of Agricultural Education; 1921; 540 Spruce Street; 71W.

Andrews, Edgar Lewis, B.S.Agr. (Cornell, 1898); Associate Professor of Poultry Husbandry and Assistant Poultryman, Experiment Station; 1917; 1913; East Willey Street; 880M.

Angelo, Ernest, B S.Agr. (W. V. U., 1919); Instructor in Horticulture and Assistant Horticulturist in the Experiment Station; 1919; 151 McLane Avenue.

Anthony, Ernest Lee, M.S. (University of Pennsylvania, 1914); Professor of Dairy Husbandry and Head of the Department of Dairy Husbandry in the Experiment Station; 1919; State Dairy Farm; 514R.

Arkin, Aaron, Ph.D. (Chicago, 1913); M.D. (Rush Medical College, 1912); Professor of Pathology and Bacteriology; 1913; 519 Front Street; 267.

Armstrong, Robert Allen, A.M. (Harvard, 1903); L.H.D.; Professor of English Language and Literature; 1903; 1893; 732 University Terrace; 29R.

Arnett, Lonna Dennis, Ph.D. (Clark University, 1903); Librarian; 1910; 79 Grant Avenue; 368R.

Atkeson, Thomas Clark, Ph.D. (Central Normal College, 1891); Professor of Animal Husbandry, Emeritus; 1914; Washington, D. C.

Atwood, Horace, M.S.Agr. (Cornell, 1893); Poultryman, Experiment Station; 1916; 1897; 410 Charles Ave.; 455J.

Barrett, Harold James, M.S. (W. V. U., 1920);Assistant in Soils, Agricultural Experiment Station; 1921; 512 North High Street; 1062J.

Bancroft, George Russell, Ph.D. (Yale, 1917); Associate Professor of Chemistry; 1920; 23 Lincoln Avenue.

Barbe, Waitman, A.M. (W. V. U., 1890); Litt.D.; Director of the Summer School and Professor of English; 1911; 1895; Anderson Place.

Beers, Clayton Lawrence, Ph.G. (Ferris Institute, 1917); Assistant in Pharmacology; 1920; 66 Jackson Street.

Berg, Anthony, B.S. (Wisconsin, 1912); Assistant Plant Pathologist, Experiment Station; 1913; 485 High Street; 364R.

Bergy, Gordon Alger, Ph.C., M.S. (Michigan, 1916); Associate Professor of Pharmacy; 1920; 1916; 308 Park Street.

Bishop, Charles Edward, Ph.D. (Leipsic, 1889); Professor of Greek Language and Literature; 1911; 151 McLane Avenue; 563W.

Black, Louis, Director of the School of Music; 1909; 253 McLane Avenue; 495.
Boomsliter, George Paul, M.S. (Illinois, 1914); Professor of Mechanics; 1920; 48 Willey Driveway.
Bonar, Martin Loxley, M.D. (Western Reserve, 1918); Professor of Pharmacology; 1920; 89 Washington Street; 683J.
Boughner, Jennie DeLawder, A.B. (W. V. U., 1912); Assistant Librarian; 1915; 392 Willey Street; 984J.
Bragonier, Arthur Taylor, B. S. C. E. (W. V. U., 1916); Instructor in Surveying; 1920; 118 Willey Street; 221J.
Bray, Charles McChesney, M.D. (Western Reserve, 1918); Assistant in Physical Diagnosis; 1919; New Dominion Building, 123.
Breck, Marion Florilla, M.S. (Wisconsin, 1920); Assistant Professor of Education and Home Economics; 1920; 591 Spruce Street; 345W.
Brooks, Chandler Linn, Superintendent of Buildings and Grounds; 1917; 779 North Front Street.
Brooks, Frank See, Instructor in Machine Design and Mechanical Drawing; 1920; 394 Willey Street; 188R.
Brown, Charles Kepler, Instructor in Mining (Extension); 1919; Wellsburg, W. Va.
Brown, Samuel Boardman, A.M. (W. V. U., 1886); Professor of Geology and Mineralogy; 1892; 1890; 640 High Street; 796J.
Brunetti, Mendor Thomas, A.M. (W. V. U., 1920); Instructor in French; 1920; 491 Front; 1024M.
Brunhoff, Sophie W., A.B. (University of Cincinnati, 1918); Director of Physical Education for Women; 1921; 87 Grant Avenue; 1320.

Callahan, James Morton, Ph.D (Johns Hopkins, 1897); Professor of History and Political Science and Dean of the College of Arts and Sciences; 1916; 1902; 136 Willey Street; 586J.
Callen, Alfred Copeland, E.M., M.S. (Lehigh 1909, 1911); Professor of Mining Engineering; 1917; 45 Jones Avenue; 754W.
Campbell, Orman Crawford; Student Assistant in Zoology; 1921; 9 Liberty Street; 292M.
Cannaday, Charles Benton, A.M. (Roanoke College, 1898); Professor of Latin; 1916; 1914; 12 Hagan's Avenue; 1167M.
Cantrall, Charles McKee, B.D., A.M. (Princeton, 1910, 1912); D.D.; Professor of Philosophy and Psychology, 1919; 718 Grand Street; 481R.
Carl, William John; Instructor in Foundry Practice; 1920; 107 Green Street; 1042R.
Carlin, Leo, A.B., LL.B. (W. V. U., 1909, 1910); Professor of Law; 1920; 1916; 27 Wilson Avenue; 282R.
Cather, Harold Malcolm, B.S.M.E. (Texas A. and M. College); Instructor in Drawing; 1919; 284 Second Street.
Cavins, Lorimer Victor, A.M. (Harvard, 1910); Professor of Education; 1919; 26 Demain Avenue.
Chambers, Margaret Jane, B.S. (Wisconsin, 1921); Instructor in Home Economics; 1921; 628 High Street.
Chidester, Floyd Earle, Ph.D. (Clark University, 1911); Associate Professor of Zoology; 1919; 24 Demain Avenue; 631J.
Chitwood, Oliver Perry, Ph.D (Johns Hopkins, 1905); Professor of History; 1907; 312 Park Street; 683W. (On leave of absence during first semester.)
Clark, Friend Ebenezer, Ph.D. (Johns Hopkins, 1902); Professor of Chemistry; 1914; 649 Spruce Street; 830R.

Cochrane, Thomas Joseph, B.S. (New Hampshire, 1919); Assistant Chemist, Agricultural Experiment Station; 1920; 26 Wilson Avenue.

Colwell, Rachel Hartshorn, B.S., M.A. (Columbia, 1905); Professor of Home Economics; 1920; 1910; 87 Grant Avenue; 469.

Cornell, Ferris Dewey, Jr., B.S. (Syracuse University, 1919); Instructor in Farm Engineering; 1921; 151 McLane Avenue; 563W.

Cox, John Harrington, A.M. (Harvard, 1900); Professor of English Philology; 1904; 1902; 34 University Driveway; 563J.

Crane, Dee, Potato Specialist, Agricultural Extension Staff; 1917; North Front Street; 804J.

Crane, Harley Lucius, M.S.Agr. (W. V. U., 1918); Associate Professor of Horticulture and Associate Horticulturist, Experiment Station; 1920; 1914; 757 North Front Street; 134R.

Crawford, Adam; Instructor in Mining (Extension); 1920; 230 Watson Avenue, Fairmont, W. Va.

Creech, Benjamin Franklin, B.S.Agr. (University of Kentucky, 1917); Livestock Specialist, Agricultural Extension Staff; 1919; North Spruce Street; 870J.

Criswell, Evans Engle; Instructor in Mining Extension; 1921; Beckley, W. Va.

Cutright, Paul Russell, A.B. (W. V. U., 1921); Assistant in Entomology; 1921; 201 Grant Avenue.

Dadisman, Andrew Jackson, M.S.Agr. (Cornell, 1914); Associate Professor of Rural Economics and Farm Management and Assistant in Farm Management, Experiment Station; 1916; 115 Beverly Avenue; 873J.

Darby, Arleigh Lee, A.M. (Waynesburg College, 1904); Professor of Romance Languages; 1920; 1910; 487 High Street; 833J.

Davies, Earl Claudius Hamilton, Ph.D. (Chicago, 1917); Associate Professor of Chemistry; 1920; 255 Richwood Avenue.

Daughenbaugh, Paul Jones; Student Assistant in Chemistry; 1921.

Davis, Hannibal Albert; Student Assistant in Mathematics; 1921.

Davis, Roland Parker, M.C.E., Ph.D. (Cornell, 1908, 1914); Professor of Structural and Hydraulic Engineering, 1912; 1911; 16 Demain Avenue; 263J.

Deahl, Jasper Newton, Ph.D. (Columbia, 1906); Professor of Education; 1901; 414 Park Street; 660R. (Extension work at Wheeling during first semester.)

Dearborn, Harley, L., Sergeant U. S. Infantry (D.E.M.L); Assistant to Professor of Military Science and Tactics; 1921; 148 McLane Avenue.

Deatrick, Eugene Peyton, Ph.D. (Cornell, 1917); Associate Professor of Soils and Soil Technologist, Agricultural Experiment Station; 1921; 732 University Terrace.

Dickinson, Edmund Charles, A.B. (Earlham College, 1903); J.D. (Michigan, 1911); Professor of Law; 1921; 58 University Driveway.

Dille, Lucy Betzhoover; Assistant in Vocal Music; 1921; Pleasants Street.

Dodd, David Rollin, B. S.Agr. (W. V. U., 1914); Agronomy Specialist, Agricultural Extension Staff; 1919; 39 Maple Avenue; 681W.

Dodds, Gideon Stanhope, Ph.D. (University of Pennsylvania, 1910); Associate Professor of Histology and Embryology, 1920; 1918; 15 Brown Street.

Dormer, Max; Instructor in Violin; 1918; 258 McLane Avenue; 715W.

Doolittle, Lambert McChesney; Student Assistant in the Law Library; 1921; 723 North Front Street.
Dorsey, Maxwell Jay, Ph.D. (Cornell, 1913); Professor of Horticulture and Horticulturist of the Agricultural Experiment Station; 1921; 307 University Driveway.

Early, Junius Campbell, C.E. (University of Texas, 1920); Instructor in Mechanics; 1921; 552 Spruce Street; 284M; resigned October, 1921.
Eiesland, John Arndt, Ph.D. (Johns Hopkins, 1898); Professor of Mathematics; 1907; 23 Demain Avenue; 317R.
Ezell, Belton Bonner, B.S.Agr. (Clemson College, 1908); Assistant Director in Charge of Livestock; Agricultural Extension Staff; 1919; 1914; 100 Beverly Avenue; 450J.

Federer, George Andrew, Jr., A.B. (W. V. U., 1920); Assistant in Chemistry; 1919; 23 Euclid Avenue; 631M.
Fisher, Claire, A.M. (W. V. U., 1920); Instructor in Mathematics; 1920; 1918; 52 University Driveway; 124.
Ford, Margaret, B.S.H.E. (Iowa State College); In charge Farm Women's Clubs; Agricultural Extension Staff; 1920; 580 Spruce Street.
Ford, Orfa Rex, B.S. (Salem College, 1915); Instructor in Physics; 1920; 300 Grand Street; 1171J.
Fordyce, Cless Yelving; Student Assistant in Chemistry; 1921; 574 Price Street; 963R.
Forest H. Ubald, Ph.D. (————————); Instructor in French and Spanish; 1922.
Forman, Alexander Hardie, E.E. (W. V. U., 1908); M.M.E., Ph.D. Cornell, 1909, 1912); Professor of Electrical Engineering; 1916; 1913; 53 Morris Street; 893M.
Frame, Nat Terry, A.B. (Colgate, 1899); Director of Agricultural Extension; 628 North High Street; 731J.
Frame, Ray Ira, B.S.; Assistant in Physiology and Physiological Chemistry; 63 Kingwood Street; 1330.
Frost, Elizabeth Dee, A.M. (Columbia, 1919); Instructor in English; 1919; 52 University Driveway.

Garber, Ralph John, M.S. (Minnesota, 1917); Associate Professor of Agronomy and Associate Agronomist, Agricultural Experiment Station; 1920; 312 Park Street.
George, Enoch Franklin, Ph.D. (Ohio State University, 1920); Assistant Professor of Physics; 1920; 29 Lincoln Avenue; 173R.
Giddings, Nahum James, Ph.D. (Wisconsin, 1918); Professor of Plant Pathology, and Plant Pathologist, Experiment Station; 1919; 1908; 36 University Driveway; 667M.
Gill, James Herbert, B.M.E., M.E. (Minnesota, 1892, 1894); Professor of Machine Construction, and Superintendent of Shops; 1920; 728 University Terrace; 831R.
Gnagey, William Oliver; Instructor in Machine Shop Practice; 1920; 10 Demain Avenue.
Gray, Thomas Davis, B.S. (University of Maryland, 1915); Specialist in Horticulture, Agricultural Extension Staff; 1920; 757 N. Front Street; 134R.
Grow, George Walter, B.S.M.E. (W. V. U., 1912); M.S. (Massachusetts Institute of Technology, 1916); Assistant Professor of Machine Design and Construction; 1914; 1912; Star City Road.

Grumbine, Harvey Carson, Ph.D. (Munich, 1900); Assistant Professor of English; 1919; 68 Beverly Avenue.

Grumbein, John Behny, M.M.E. (Cornell, 1914); Professor of Steam and Experimental Engineering; 1916; 1903; 260 McLane Avenue; 881J.

Hager, Buena Brand; Bookeeper in the office of the Financial Secretary; 22 Bridge Street; 1156J.

Hall, Arthur Adams, B.S.M.E. (W. V. U., 1906); Associate Professor of Electrical Engineering; 1916; 506 Forest Avenue; 175M.

Hall, Golden Orlando, B.S.Agr. (W. V. U., 1921); Assistant in Poultry Husbandry; 1921; 293 Willey Street; 205R.

Hammond, Elmer Lionel, B.S.Pharm. (Michigan, 1921); Instructor in Pharmacy; 1921; 301 Park Street; 283R.

Hardman, Thomas Porter, M.A. (Oxford, 1914); Jur.D. (Yale, 1915); Professor of Law; 1919; 1913; 515 Grand Street; 559.

Hardy, Irvin, M.D. (College of Physicians and Surgeons, 1903); Clinical Professor of Minor Surgery; 1920; 1912; Cobun Avenue; 629J.

Hare, Alfred Jarrett, A.M. (W. V. U., 1902); Professor of Latin, and Secretary and Registrar of the University; 1898; 1889. 571 Spruce Street; 870W.

Harris, Thomas Luther, Ph.D. (Wisconsin, 1912); Associate Professor of Sociology; 1921; 10 Forest Avenue.

Hartley, Charles Henry, B.S.Agr. (W. V. U., 1917); Assistant Director, in Charge of Extension Schools and Exhibits; Agricultural Extension Staff; 1914; 5 Collins Ferry Road; 247J.

Hayes, Flora Ray, A.B. (W. V. U., 1909); Instructor in Theory and History of Music; 1910; 480 High Street; 967J.

Hayes, Leslie David, M.E. (Cornell, 1908); Professor of Machine Design and Construction; 1918; 728 University Terrace; 831R.

Hayman, Joseph Lester, B.S., Ph.C. (Michigan, 1919); Instructor in Pharmacy; 1919; 258 First Street.

Henderson, Harry Oram, M.S. (Pennsylvania State College, 1916); Assistant Professor of Dairy Husbandry; 1919; 1918; 211 Grant Avenue; 69M.

Hickman, Cleveland Pendleton, A.M. (Michigan, 1920); Instructor in Zoology; 1921; 425 North Willey Street; 329R.

Hileman, Frances Virginia; Student Assistant in Chemistry; 1921; 45 Stewart Street; 783.

Higby, Chester Penn, Ph.D. (Columbia, 1918); Associate Professor of History; 1919; 334 Park Street; 1047J.

Hill, Harry; Student Assistant in Physics; 1921; 94 Beverly Avenue; 772.

Hill, Hubert, M.S. (North Carolina, 1908); Associate Professor of Chemistry; 1920; 1910; 186 First Street; 474R.

Hill, Lawrence Benjamin, A.M. (Nebraska, 1907); Professor of Education; 1918; 182 First Street; 235J.

Hinkel, Lydia Irene, B.M. (Syracuse University, 1916); Instructor in Public School Music; 1921; 264 McLane Avenue; 235W.

Hite, Bert Holmes, M.S. (W. V. U., 1890); Chief Chemist, Experiment Station, and Professor of Agricultural Chemistry; 1895; 222 Pleasant Street; 1028. Died October 6, 1921.

Hite, Mrs. Evalyn, Assistant Librarian; 1922.

Hodge, Willard Wellington, A.M. (Yale, 1914); Professor of Chemical Engineering; 1921; 293 Willey Street; 205R.

Hodgson, Joseph Ellis, Ph.D. (Johns Hopkins, 1910); Professor of Mathematics; 1913; 1912; 209 Grant Avenue; 254R.
Hoge, Elizabeth Stewart, A.B. (W. V. U., 1920); Assistant Librarian; 1919; 68 Beverly Avenue; 1083J.
Hopwood, Arthur Thomas; Student Assistant in Zoology; 1920; 111 Beverly Avenue; 247R.
Horsefall, Hazel, B.S. (Iowa State College, 1917); Assistant in 4-H. Club Work, Agricultural Extension Staff; 1920; North Front Street; 804J.
Hudelson, Earl, A.M. (Indiana University, 1912); Professor of Secondary Education; 1920; 87 Grant Avenue; 469.
Hunker, Carrie Belle, Secretary to the Dean of the College of Arts and Sciences; 1920; 247 Fife Street; 1000J.
Hutson, Louis C.; Instructor in Mining Extension; 1921; Mt. Hope, W. Va.

Jacobson, Carl Alfred, Ph.D. (Johns Hopkins, 1908); Professor of Chemistry; 1920; 219 Cedar Street.
Jamison, Robert Roseberry, B.S.Agr. (Purdue, 1919); Instructor in Horticulture; 1921; 420 North Willey Street; 1230T.
Johnson, David Dale, A.M. (W. V. U., 1903); Professor of English; 1920; 1902; 20 University Drive.
Johnson, Mary Martin, A.B. (Meredith College, 1921); Assistant in Chemistry; 1921; 375 Spruce Street; 395J.
Johnston, John Charles; Secretary to the Dean of the College of Agriculture and Chief Clerk Agricultural Experiment Station; 1914; 151 McLane Avenue; 995R.
Johnston, Ross Bradshaw, in Charge of University News Service; 1919; 19 Pennsylvania Avenue; 187M.
Jones, Clement Ross, M.E. (W. V. U., 1897); M.M.E. (Cornell, 1900); Dean of the College of Engineering and Professor of Power Engineering; 1911; 1895; 317 Willey Street; 205J.
Jones, William J., Jr, B.S.Agr.Educ. (Pennsylvania State College, 1921); Director University Y. M. C. A.; 1921; Lorentz Place.

Kaplan, Benjamin Bernard, A.B. (Harvard, 1918); Assistant Chemist, Agricultural Experiment Station; 1920; 686 Grand Street; 481W.
Kay, Wilbur Jones, A.M. (Washington & Jefferson College, 1919); Professor of Public Speaking; 1919; 44 Wilson Avenue; 923W.
Kendrick, William Henry; A.B. (W. V. U., 1916); Assistant Director of State Boys' Clubs; Agricultural Extension Staff; 1919; 1913; R. F. D. 1; 411J.
Kessel, Charles Royal, M.D. (Jefferson Medical College, 1921); Associate Professor of Pharmacology; 1921; Spruce Street.
King, Benjamin Walter, A.M. (Harvard, 1917); Assistant Professor of Economics; 1917; 1911; Cheat Road, R. D. 3.
Klass, Fred Charles; Instructor in Mining Extension; 1921; Logan, W. Va.
Knight, Henry Granger, Ph.D. (Wisconsin, 1917); Chemist and Director Agricultural Station; 1922.
Knight, John Jarrett, B.S.M.E. (W. V. U., 1921); Assistant in Mechanical Drawing; 1921; 658 Spruce Street; 830W.
Knowlton, Harry Edward, B.S. (Michigan Agricultural College, 1912); Assistant Professor of Horticulture and Associate Horticulturist in the Experiment Station; 1919; 628 Spruce Street; 71M.
Kunst, Frank Batson, A.B. (W. V. U., 1906); Chemist in Charge, Experiment Station; 1901; Hough Street; 1028.

Kerslake, Charles Denison, C.E. (Rensselear Polytchnic, 1917); Instructor in Mechanics: 1921; 204 Simpson Street; 678J.

Lawall, Charles Elmer, E.M. (Lehigh University, 1914); Instructor in Mining Engineering; 1921; 665 Spruce Street.
Lazzell, Charles Lester, M.S. (W. V. U., 1920); Instructor in Chemistry; 1919; 1921; 257 McLane Avenue; 717M.
Leith, Theodric Bryant, A.B. (Washington & Lee, 1916); Assistant Chemist, Agricultural Experiment Station; 1919; 749 North Front Street.
Livesay, Edward Alexander, A.M. (University of Missouri, 1917); Professor of Animal Husbandry and Specialist in Animal Husbandry in the Agricultural Experiment Station; 1919; 234 Prospect Street; 731R.
Longwell, John Harwood, M.S.Agr. (Missouri, 1920); Assistant Professor of Animal Husbandry; 1921; 4 South Walnut Street; 245R.
Lorentz, Mary Belle, Assistant Secretary, Dean's Office, College of Engineering; 1918; 130 Pleasants Street.
Lueder, Charles Augustus, D.V.M (New York State Veterinary College, 1902); Professor of Veterinary Science; 1920; 1908; 752 North Front Street; 804R.
Lytle, Clara, A.B. (W. V. U., 1910); Instructor in English; 1919; 230 Kirk Street; 1204.

McGarry, Edmund Daniels, M.B.A. (Harvard, 1921); Assistant Professor of Economics; 1921; 293 Willey Street.
McKee, Louis Alan; Assistant Law Librarian; 1920; 112 Cedar Street; 1164R.
McGuire, Frances Folsom, M.A. (Teachers' College, 1917); District Home Demonstration Agent, Agricultural Extension Staff; 1921; 580 Spruce Street; 349J.
McKee, Mildred Barnett, Stenographer to the President; 1920; 549 Price Street.
McIlvaine, Theodore Clinton, B.S.Agr. M.S. (Pennsylvania Ctate College, 1915, 1916); Assistant Agronomist, Experiment Station; in Charge of Agricultural Sub-station, Maggie, W. Va.
Maclay, Eleanor Reed, B.S. in Educ. (University of Missouri, 1920); Instructor in Home Economics; 1920; 571 Spruce Street; 481W.
Maclin, Edward Silver, B.S. in Edu. (University of Tennessee, 1916); Professor of Industrial Education; 1921; 122 Wagner Road; 1158W.
Martin, Alma; Student Assistant in Music; 1921.
Madden, Joseph Warren, B.A. (Illinois, 1911); J.D. (Chicago, 1914); Dean of the College of Law; 1921; 307 Duquesne Avenue.
Martin, Gertrude, A.B. (W. V. U., 1920); Instructor in German; 1920; 285 Second Street; 717J.
Mason, Ralph Louis; Specialist in Poultry, Agricultural Extension Staff; 1919; 420 North Willey Street.
Mercer, Zelma; Student Assistant in the Library; 1921; 176 McLane Avnue.
Mestrezat, Walter Alexander; Chief Musician, Cadet Corps, and Instructor in Band Music; 1901; 57 Bridge Street; 1157J.
Miller, Alvin Martin, B.S.M.E. (W. V. U., 1921); Assistant in Steam and Experimental Engineering; 1921; 95 Beverly Avenue; 1395J.
Milner, Mary Alice, B.S.H.E (Ohio State, 1917); Instructor in Home Economics; 1920; 580 Spruce Street.
Mitrani, Charles, M.A. (California, 1917); Instructor in Romance Languages; 1921; 686 Grand Street; 481W.

Molby, Fred A., Ph.D. (Cornell, 1910); Professor of Physics; 1920; 506 North High Street.
Montgomery, Allen Guy, A.B. (W. V. U., 1917); Instructor in Mathematics; 1920; 1919; 284 Second Street.
Moore, Susan Maxwell, A.B. (W. V. U., 1909); Dean of Women and Instructor in Piano; 1903; Woman's Hall; 9775.
Moreland, Mary Cathryn, B.S.Agr. (Missouri, 1916); District Home Demonstration Agent, Agricultural Extension Staff; 1921; 334 Willey Street.
Morris, Russell Love, C.E. (W. V. U., 1898); Professor of Railway and Highway Engineering; 1903; 1895; 294 Grand Street; 621J.
Morris, Samuel, Ph.D. (Ohio State, 1921); Professor of Chemistry; 1920; 1916; 56 University Driveway.
Morris, Samuel, John, M.D. (College of Physicians and Surgeons, 1912); Professor of Anatomy; 1920; 1912; 83 Kingwood Street; 696J.
Morse, Withrow, Ph.D. (Columbia, 1908); Professor of Physiology and Physiological Chemistry; 1920; 1918; 211 Gordon Street.
Moyland, Helen Sara, A.B. (Radcliffe College, 1912); Secretary to the Dean of the College of Law; 1920; 223 Grant Avenue.
Mumma, Harlan Leslie; (U. S. Military Academy, 1916); Captain United States Army; Professor of Military Science and Tactics and Commandant of Cadets; 1919; 390 Willey Street.
Myers, Donald J.; Captain U. S. Infantry (D.O.L.); Assistant professor of Military Science and Tactics; 1921; 446 Spruce Street.
Myers, Harry C.; Sergeant U. S. Infantry (D.E.M.L.); Assistant to the Professor of Military Science and Tactics; 1921; 44 Stewart Street.

Norcross, Archer Rice, B.S.C.E. (California, 1919); Instructor in Structural and Hydraulic Engineering; 1921; 305 University Driveway; 1022R.
Nelson, Roy Ezekiel, B.S C.E., Instructor in Mining Engineering; 1921; 15 Brockway Avenue.
Ney, Glenn Morris; Student Assistant in the Library; 1921; 164 High Street; 1274.
Norris, William, Jr.; Instructor in Mining (Extension); 1920; Welch, W. Va.

Odland, Theodore Edward, M.S. (Minnesota, 1920); Assistant Professor of Agronomy; 1921; 39 Maple Avenue.

Patch, Roland Harrison, M.S.Agr. (Cornell, 1916); Assistant Professor of Horticulture and Assistant Horticulturist, Experiment Station; 1917; 79 Grant Avenue; 368R. (Resigned Feb. 1, 1922).
Pearis, Leonard Marion, B.S.Agr., M.S. (Kansas Agricultural College, 1905, 1907); Professor of Entomology and Research Entomologist; Experiment Station; 1913; 1912; 50 Jones Avenue; 895R.
Perry, Enos Johnson, B.S.Agr. (Penn. State, 1916); Specialist in Dairying; Agricultural Extension Staff; 1920; 1 South High Street; 814R.
Pettigrew, Helen Purinton, A.M. (W. V. U., 1921); Instructor in English; 1920; 1919; 48 University Driveway.
Pollock, Rebecca Luella, A.M. (Columbia, 1916); Assistant Professor of English; 1920; 1916; 128 Willey Street.
Prettyman, Hugh Willard, B.S.Agr. (W. V. U., 1917); Specialist in Horticulture; Agricultural Extension Staff; 209 Wells Street; 604J.

Prove, George Washington; Student Assistant in Chemistry; 1921; 725 North Front Street; 29J.
Purinton, Bertha Browning, A.M. (W. V. U., 1902); Assistant to the Dean of Women; 1919; 247 Willey Street; 258.
Purinton, Daniel Boardman, Ph.D. (University of Nashville, 1892); LL.D. (Denison University, 1889); President and Professor of Philosophy, Emeritus; 1911; 1873; 89 Grandview Avenue; 793R.

Queer, Thomas H.; Instructor in Mining Extension; 1921; Gallagher, W. Va.
Quisenberry, Karl Spangler, B.S.Agr. (Kansas State Agricultural College, 1921);Instructor in Agronomy; 1921; 633 Spruce Street; 830M.

Raines, Morris Abel, A.M. (Columbia University, 1917); Instructor in Botany; 1920; 56 University Driveway; 132W.
Reed, Perley Isaac, Ph.D. (Ohio State, 1916); Assistant Professor of English; 1920; 456 High Street; 437R.
Reese, Albert Moore, Ph.D. (Johns Hopkins, 1900); Professor of Zoology; 1907; 312 Park Street.
Reynolds, Vivian Gordon; Assistant in Library; 1920; 1917; 511 High Street; 184W.
Reeder, Benjamin Garnett, A.B. (W. V. U., 1921); Student Assistant in the Law Library; 1920; 5 South Walnut Street; 1330.
Reynolds, Clarence Newton, Jr., Ph.D. (Harvard, 1919); Assistant Professor of Mathematics; 1921; 23 Demain Avenue; 317R.
Roberts, William Ernest; Student Assistant in Chemistry.
Ropp, Clarence Daniel Luther, A.B. (W. V. U., 1921); Assistant in Chemistry; 1921; 250 First Street; 1083R.
Roush, Eva Fling, A.M. (W. V. U., 1920); Instructor in Botany; 1920; 1917; 145 Beverly Avenue; 614J.
Rouzer, Paul Charles, B.S.Agr. (Wisconsin, 1912); Instructor in Agricultural Education; 1917; 120 Beverly Avenue; 1091R.
Rufener, Louis August, Ph.D. (Harvard University, 1915); Associate Professor of Economics; 1920; 53 Euclid Avenue.
Rumsey, William Earl, B.S.Agr. (Cornell, 1891); State Entomologist; Experiment Station; 1893; 415 Park Street; 671R.
Rutledge, Reta Burnice; Instructor in Home Economics; 1921; 116 Beverly Avenue; 873W.

Sayre, Greek, A.B. (W. V. U., 1918); Assistant in English and History; 1918; 16 Overhill Street; 193W.
Scheffel, Earl Reed, M.S. (Denison University, 1908); Assistant Professor of Geology; 1919; 640 High Street; 796J.
Schroeder, Clarence Frederick, Jr., Student Assistant in Zoology; 1921; 660 High Street; 648.
Scott, Parry Mason, B.S. (W. V. U., 1921); Assistant in Pathology and Bacteriology; 1921.
Seaman, Raymer Egbert; Instructor in Woodworking and Foundry Practice; 1912; 96 Gaston Avenue; 311M.
Sefton, Lily Bell, Ph.D. (Ohio State, 1921); Assistant Professor of Chemistry; 1920; Willey Street; 1082.
Shafer, Frederick Fletcher, C.E. (Purdue, 1911); Drainage Engineer, Agricultural Extension Staff; 1921; Bureau of Public Roads, Washington, D. C.
Shaffer, James Harvey, B.S.Agr. (W. V. U., 1921); Assistant Farm Economist, Agricultural Experiment Station; 1921; 3 Forest Avenue· 175R.

Shaw, Edward Lee, B.S.Agr. (Ohio State, 1902); Sheep Specialist, Agricultural Experiment Station Staff; 1917; North Front Street.
Sherwood, Everett Clifton, M.S. (Wisconsin, 1920); Specialist in Plant Pathology, Agricultural Extension Staff; 1920; 79 Grant Avenue; 368R.
Shirey, William Brown, A.B. (W. V. U., 1921); Assistant in Chemistry; 1921; 41 Jones Avenue; 754M.
Shriver, Allie Pauline; Student Assistant in the Library; 16 Warren Street; 1179J.
Simpson, John Nathan, M.D. (Johns Hopkins, 1902); Dean of the School of Medicine and Professor of Physiology; 1912; 1902; 14 Willey Driveway; 244J.
Sima, Frank, Staff Sergeant U. S. Infantry (D.E.M.L.); Assistant to the Professor of Military Science and Tactics; 1921; 148 McLane Avenue.
Smithy, Ira Wellborne, M.S. (University of North Carolina, 1921); Instructor in Chemistry; 1921; 550 Spruce Street; 284W.
Snee, Grace Martin; Instructor in Piano and Pipe Organ; 1903; 1898; 282 Fayette Street; 1147M.
Snider, Clifford Raymond, LL.B. (W. V. U., 1917); J.D. (Harvard, 1919); Associate Professor of Law; 1921; 487 High Street; 833J.
Spangler, Robert Clinton, A.M. (W. V. U., 1916); Assistant Professor of Botany; 1920; 1912; 18 Naomi Street.
Spiker, Claude Carl, A.M. (Chicago, 1916); Assistant Professor of Romance Languages; 1920; 55 Carson Street; 319J.
Spray, Robert Spalding, M.S. (Pennsylvania State College, 1917); Assistant Professor of Bacteriology; 1921; 149 Beverly Avenue.
Stansbury, Harry Adams, B.S. (W. Va. Wesleyan, 1915); Director of Athletics; 1917; 353 Wilson Avenue; 59.
Stathers, Madison, Ph.D. (Grenoble, 1905); Professor of Romance Languages; 1910; 1906; 288 Grand Street; 594W.
Steadman, Marja Brown, A.B. (Minnesota, 1913); Instructor in Public Speaking; 1920; 1919; 116 Beverly Avenue; 873W.
Stewart, James Scott, M.S. (W. V. U., 1880); Professor of Mathematics, Emeritus; 1907; 1877; 146 Willey Street; 120R.
Stillman Herman Deloss; Assistant in Woodworking; 1920; 10 Falling Run Street; 596J.
Stockdale, Charles Ellsworth, B.S.Agr. (W. V. U., 1916); Agricultural Editor; 1916; Morgantown.
Strickler, Laura, Secretary to the President; 1920; 247 Fife Street; 1000J.
Summers, Nelle, A.B. (Alabama, 1912); Director Y. W. C. A.; 1920; 87 Grant Avenue; 1320.
Sutton, Luther Francis, B.S.Agr. (Wisconsin, 1912); Assistant Horticulturist in the Experiment Station, and Superintendent of Reymann Memorial Experiment Farm; 1917; 1912; Wardensville, W .Va.

Swenholt, Helmer, Captain, Field Artillery, U. S. A.; Assistant Professor of Military Science and Tactics and Commanding Officer of Engineer Unit; 1919; 752 Front Street.

Tilton, John Littlefield, Ph.D. (Chicago, 1910); Associate Professor of Geology; 1920; 41 Euclid Avenue; 969M.
Torrey, Marion Marsh, A.M. (Brown, 1917); Instructor in Mathematics; 1920; 116 Beverly Avenue; 873W.
Trotter, Frank Butler, A.M. (Roanoke, 1895); LL.D. (W. Va. Wesleyan, 1914); President; 1916; 1907; 549 Front Street; 151J.

Trotter, James Russell, LL.B., A.M. (Harvard, 1896); Professor of Law; 1908; 504 Grand Street; 1198J.
Truscott, Frederick Wilson, Ph.D. (Harvard, 1896); Professor of Germanic Languages and Literature; 1899; 570 Spruce Street.
Tuckwiller, Ross Homan, B.S.Agr. (W. V. U., 1916); Assistant in Beef Cattle Investigations, Experiment Station; 1916; Lewisburg, W. Va.

Vandervort, Hu Swisher, B.S.Agr. (W. V. U., 1911); Assistant Director in Charge of Horticulture, Agronomy and Dairying; Agricultural Extension Staff; 1919; 1912; 51 Maple Avenue; 1163J.
Van Liere, Edward Jerald, M.D. (Harvard, 1920); Professor of Physiology; 1921; 79 Grant Avenue; 368R.
Van Derveer, George Jay, B.S. (Rutgers, 1921); Assistant Poultry Specialist, Agricultural Extension Staff; 1921; 420 North Willey Street.
Vickers, Enoch Howard, A.M. (Harvard, 1894); Professor of Economics and Sociology; 1910; 748 University Terrace; 692J.

Waggoner, Chauncey William, Ph.D. (Cornell, 1909); Professor of Physics; 1909; 730 University Terrace; 968M.
Walls, Hoy Jay, B.S.E.E. (W. V. U., 1920); Instructor in Electrical Engineering; 1921; 7 South High Street; 1368J.
Weakley, Charles Edward, Jr.; Assistant Chemist, Experiment Station; 1907; Peabody Hotel.
Weil, Jeannetta; Chief Clerk, Agricultural Extension Staff; 1912; 272 Prospect Street.
West, Rufus Asa; Instructor in Metal Working; 1913; 1892; 181 First Street; 132J.
Westover, Kyle Chester, B.S. (New Hampshire, 1917); Assistant Professor of Horticulture; 1920; 471 High Street.
Wharton, Ray Hunter, B.S. (W. V. U., 1921); Assistant in Anatomy and Histology; 1921; 4 Brockway Avenue.
White, Bennett Sexton, B.S.M.E. (W. V. U., 1897); Assistant Professor of Drawing; 1919; 115 Quay Street; 873M.
Whitehill, Alexander Reid, Ph.D. (Washington & Jefferson College, 1887); Professor of Chemistry; 1885; Prairie Avenue and Wagner Road; 699. (Died October 25, 1921.)
Willey, William Patrick, A.M. (Dickinson College, 1865); Professor of Equity, Jurisprudence and Commercial Law, Emeritus; 1912; 1883; 250 Pleasant Street; 150M.
Williams, Edgar, A.M. (Harvard, 1915); Instructor in English; 1918; 56 Ash Street; 263M.
Williams, Maurine; Assistant Secretary Dean's Office, College of Engineering; 1921; 591 Spruce Street; 349W.
Willis, Dennis Martin, A.B., LL.M. (W. V. U., 1905, 1908); Financial Secretary; 1915; 1895; 212 Park Street; 1078J.
Wilson, Charles Vinyard, B.S.Agr. (W. V. U., 1919); Instructor in Animal Husbandry; 1919; 520 North High Street; 284R.
Wilson, James Everett; Student Assistant in the Library; 1921; 29 Riverview Avenue.
Winkler, Charles Herman Ph.D. (Missouri, 1916); Professor of Agricultural Education; 1917; 1916; 10 Clark Street; 864R.
Winter, John E., Ph.D. (University of Michigan, 1917); Assistant Professor of Psychology; 1921; Grandview Avenue.

York, Harlan Harvey, Ph.D. (Johns Hopkins, 1911); Professor of Botany; 1919; 234 Jackson Avenue; 1185.

LIST OF STUDENTS

STUDENTS ENROLLED IN THE COLLEGES.

NOTE.—The following list includes the names of all students enrolled in the various colleges of the University, arranged in alphabetical order. Following each student's name and address are given his class, course of study which he is pursuing, or the degree for which he is a candidate. The word freshman, sophomore, etc., following the student's name, indicates his rank on the first day of November, 1921. Regular students in the College of Law have the following standing in the University: first-year students, sophomore; second-year students, junior; third-year students, senior; except those holding a bachelor's degree. Students whose names are marked with an asterisk (*) are ranked as freshmen, but are conditioned in one or more preparatory subjects. Students marked as special students are classified in accordance with the regulations found on page 31 of this Catalogue.

Aaron, Jeanner Herman	Amelia, Va.	Voc., Agr.
Acker, Kenneth Eugene	Wheeling	Fr., A. B.
Adams, Arnold Luther	Fairmont	Fr., B. S. M. E.
Adams, Guy Carson	Keyser	Voc., Agr.
Adams, Jane Woolcock	Huntington	Sen., A. B.
Adams, John Quincy	Huntington	1st Yr. Med.
Adams, Mary Eugenia	New Martinsville	Fr., A. B.
Addair, John	Panther	Jun., A. B.
Addis, Carroll Weldin	Connellsville, Pa.	Soph., B. S. E. E.
Ahouse, John	New Milton	1st Yr. Med.
Akins, John Russell	Hundred	Sr., B. S. C. E.
Alderson, Charles Luther	Morgantown	*Fr., A. B.
Alderson, Ada Lee	Summersville	Sen., A. B.
Allen, Alice Allene	White Sulphur Spgs.	Soph., A. B.
Allen, Anna Jane	Morgantown	Sen., A. B.
Allen, Mary Rosamond	Morgantown	Fr., A. B.
Allen, Ruby Vivian	Ravenswood	Sen., B. S. H. E.
Alvarez, Manuel	Caguas, P. R.	Soph., B. S. Agr.
Amick, Eldon Andrew	Charleston	1st Yr. Med.
Amick, Roland Andrew	Charleston	Voc., Phar.
Ammons, Nellie Perrel	Rice's Landing, Pa.	Grad., A. & S.
A. B., West Virginia University, 1917		
Anderson, Aleatha Evelyn	Clarksburg	Soph., A. B.
Anderson, Charles	Littleton	*Fr., A. B.
Anderson, Charles Claude	Morgantown	Grad., A. & S.
M. S., West Virginia University, 1921		
Anderson, Delmer Thomas	Clarksburg	Fr., A. B.
Anderson, James Lee	Littleton	Sen., A. B.
Anderson, Leroy Paul	Salem	*1st Yr. Phar.
Anderson, Robert Reger	Cowen	*Fr., A. B.
Anderson, Seaton Tinsley	Charleston	1st Yr. Law
Andrews, Dorothy	Morgantown	*Fr., B. S. H. E.
Andrews, Helen Frances	Morgantown	*Fr., B. S. H. E.
Angelillo, Marc Clemens	Newark, N. J.	1st Yr., Med.

Angelo, Ernest	Parsons	Grad., Agr.
B. S., Agr., West Virginia University, 1921		
Angotti, John Thomas	Clarksburg	*Fr., B. S. C. E.
Ankeny, Roy Horace	Morgantown	Sen., A. B.
Arias, Thomas Albert	Panama City, R. P.	Sen., A. B.
Armstrong, Allie Woodson	Huntington	Jun., A. B.
Armstrong, Virginia Dent	Grafton	Sen., A. B.
Arner, Alvin Lester	Chester	*Fr., A. B.
Arnold, Edna	Weston	Sen., A. B.
Arthur, Oscar Fred	Weston	Soph., B. S. E. M.
Ash, Dwight Avery	Lumberport	Soph., A. B.
Ashcraft, Word L.	Morgantown	Jun., B. S. Agr.
Ashley, David Louis	Oak Hill	*Fr., B. S. E. E.
Atwood, Dorothy May	Morgantown	Jun., B. S. H. E.
Atwood, Norman Calvin	Morgantown	Soph., B.S.Ch.E.
Ayers, Estel Leroy	Piedmont	Fr., B. S. M. E.
Ayers, Joseph Allen	Weston	Grad., A. & S.
A. B., West Virginia University, 1917.		
Bachman, Adelaide Sophia	Wheeling	Jun., A. B.
Baer, Herbert Kelsey	Morgantown	Sen., A. B.
Bagwell, Spurgeon Haden	Morgantown	Voc., Agr.
Bailey, Ernest Brooks	Craigsville	*Fr., A. B.
Bailey, Harvey Clarke	Morgantown	Sen., B. S. Agr.
Bailey, Hugh Estil	Morgantown	Soph., B.S.Ch.E.
Bailey, Jason Glee	Morgantown	Voc., Agr.
Bailey, Randolph Cooke	Keyser	Soph., A. B.
Bailey, Raymond Evan	Griffithsville	Soph., A. B.
Bair, Clarence Edmund	Braddock, Pa.	Fr., A. B.
Baird, Anna Elizabeth	Elm Grove	Fr., B. S. H. E.
Baird, Josiah Wallace	Elm Grove	Soph., B. S. Agr.
Baker, Frank McNeer	Alderson	Fr., B. S. E. E.
Baker, Grace Elliott	Morgantown	Grad., A. & S.
A. B., West Virginia University, 1921		
Baker, James Plummer	Cheat Haven, Pa.	Soph., A. B.
Baldwin, Mary Edith	Wheeling	Fr., A. B.
Ball, Gordon	Ravenswood	Fr., A. B.
Ball, Walter Frank	Johnstown, Pa.	3rd Yr., Law
Ballard, Bertha Kathleen	Peterstown	Fr., A. B.
Ballard, Howard Hampton	Peterstown	Fr., A. B.
Ballard, Maggie Byrnside	Greenville	Soph., A. B.
Ballengee, Graham Erskine	Huntington	Fr., B. S. E. M.
Ballentine, William Ernest	Pine Grove	Voc., Law
Barber, Lucy	Charleston	Fr., A. B.
Barber, Sarah Couch	Charleston	Fr., A. B.
Barker, Byron Glen	Morgantown	Voc., Agr.
Barker, Gladys Gwendolyn	Morgantown	Fr., A. B.
Barnard, Charles Edwin	Elkins	Fr., A. B.
Barnard, George Fisher	Richard	*Fr., B. S. E. M.
Barnard, Vernon Michael	Richard	*Fr., A. B.
Barnes, Burlin Bradford	Elkins	Fr., B. S E. M.
Barnes, Edith	Morgantown	Soph., B. S. H. E.
Barnes, Ralph Mosser	Morgantown	Jun., B. S. M. E.
Barnes, Sarah Grace	Weston	Jun., A. B.
Barnette, Genevieve Geraldine	Flatwoods	*Fr., A. B.
Barns, Mary Hodges	Morgantown	Grad., A. & S.
A. B., West Virginia University, 1921		

Baron, Nicholas L.	Holliday's Cove	*Fr., B. S. E. E.
Barrett, Edgar Overton	Fairmont	Sen., A. B.
Barrett, Thelma Rose	Cameron	Fr., A. B.
Barrett, Winfield Ocal	Kokomo, Ind.	Soph., B.S.Ch.E.
Barrickman, Everett	Morgantown	Voc., Agr.
Bartell, Joseph Anthony	Tarentum, Pa.	Soph., B. S. E. E.
Bartlett, John Frank	Gassaway	*Fr., B. S. E. M.
Batten, Beryl	Morgantown	Sen., A. B.
Batten, Ruth	Morgantown	Grad., A. & S.
A. B., West Virginia University, 1921		
Baxter, Mary Elizabeth	Sutton	Fr., A. B.
Bayer, Beverly Pitzer	Berkeley Springs	*Fr., A. B.
Bayles, Wesley Howard	St. Marys	Fr., A. B.
Beale, Otha Bryan	Mingo	Voc., Agr.
Beard, Harry Elmer	Huntington	*Fr., A. B.
Beatty, Bessie Leah	Morgantown	Jun., A. B.
Beck, Calvin Henry	Wheeling	1st Yr., Phar.
Becker, Russell George	Dayton, Ohio	*Fr., A. B.
Beeghley, Arthur Dovener	Jane Lew	Voc., Agr.
Beeghley, Jesse Wirt	Weston	Sen., A. B.
Bekenstein, Joseph	Charleston	Jun., B. S. Ch. E.
Bell, Charley Ross	Rector	Voc., Agr.
Bell, Eugene William	Morgantown	Fr., B. S. E. M.
Bell, Ezeriah Franklin	Teays	Voc., Agr.
Bell, Henry Serig	Wheeling	*Fr., B. S. M. E.
Bell, Roy Austin	Shepherdstown	2nd Yr., Med.
Bennett, Gay	Morgantown	Fr., A. B.
Bennett, Gladys Marian	Morgantown	Sen., B. S. H. E.
Bennett, Mary Louise	Morgantown	Soph., A. B.
Bennett, Paul Clifford	Morgantown	Jun., B. S. Agr.
Berardelli, Samuel	Follansbee	1st Yr., Med.
Berenfield, Simon	Pittsburgh, Pa.	2nd Yr., Med.
Bernam, Morris	Charleston	Fr., B. S. M. E.
Berry, Eleanor	Morgantown	Fr., B. S. H. E.
Berry, Eugene Archbald	Morgantown	*Fr., B. S. E. E.
Berry, Myrtle Almira	Keyser	Fr., A. B.
Bickel, Francis Holliday	Parkersburg	Soph., B. S. M. E.
Bickner, Alvah Warren, Jr.	Rutheford, N. J.	2nd Yr., Med.
Biljchevich, Milan	Vukovar, Serbia	Jun., B. S. Agr.
Billingslea, Arthur Blake	Fairmont	2nd Yr., Law
Binns, Carl Brooks	Fairmont	*Fr., A. B.
Bishop, Marvin Albright	Terra Alta	Jun., A. B.
Blackford, Francis Brown	Bardine	Fr., A. B.
Blackwood, Edwin Neale	Pt. Pleasant	Fr., B. S. Ch. E.
Blair, Samuel Brice	New Martinsville	Fr., B. S. E. E.
Blake, Gladys Mae	Morgantown	Sen., A. B.
Bland, Charles Newton	Weston	Fr., A. B.
Bland, Theodoric Edwards	Weston	Soph., B. S. Agr.
Blanford, Robert Sprigg	Morgantown	Soph., B. S. M. E.
Blatchford, Edith La Verne	Belington	Jun., B. S. H. E.
Blatchford, Madelon Virginia	Belington	Fr., B. S. H. E.
Bloom, Mildred Faustatine	Morgantown	Jun., A. B.
Blue, Helen Howison	Romney	Fr., A. B.
Blue, William Frederick	Charleston	1st Yr., Law
Blumenberg, Hugo Frederick	Wheeling	Fr., A. B.
Board, Bernard Carr	Charleston	Fr., B. S. M. E.

Bobbitt, James Sterling	Summersville	Jun., B. S. Agr.
Boggess, Beulah Barnes	Shinnston	Jun., A. B.
Boggess, John Carney	Shinnston	Fr., A. B.
Boggs, Carrie Helen	Franklin	Soph., A. B.
Boggs, Eva Gertrude	Big Otter	Soph., B. S. H. E.
Boggs, Louie Hiner	Franklin	Soph., A. B.
Bonar, Ross	Moundsville	Sen., A. B.
Bone, Dorothy Helen	Moundsville	Fr., B. S. H. E.
Bone, Lillian Margaret	Moundsville	Fr., A. B.
Bonner, Eugene Son	Belington	*Fr., B. S. C. E.
Bonnesen, Edith Marie	Wheeling	Soph., A. B.
Boone, Roy Elliott	Ronceverte	*Fr., A. B.
Booth, Herbert	Charleston	Fr., A. B.
Booth, Leland	Belington	Fr., B. S. Agr.
Boso, Goldie Lucille	Parkersburg	Sen., A. B.
Bosworth, Brooks Brady	Benwood	Fr., A. B.
Bosworth, Stanley Steel	Elkins	1st Yr., Law
B. A., Davis and Elkins College, 1919		
Bottome, Paul Edgar	Moundsville	*Fr., B. S. C. E.
Bottome, Virginia Marie	Moundsville	Fr., B. S. H. E.
Boundy, Austin John	Cameron	Sen., B. S. E. M.
Bourn, Warren Scudder	Morgantown	Jun., A. B.
Bowers, Karl Douglas	Clarksburg	Fr., A. B.
Bowlby, Mary Elizabeth	Morgantown	*Fr., A. B.
Bowling, George Augustus	Lewisburg	*Fr., B. S. Agr.
Bowman, Ralph	Sistersville	Soph., A. B.
Bowyer, Virgil Franklin	White Sulphur Spr.	Soph., B. S. E. M.
Boyers, Robert Hayes	Morgantown	Soph., B. S. E. E.
Brackett, Alice Steele	Fairmont	Fr., A. B.
Bradford, Harold Keith	Pennsboro	Jun., A. B.
Bradley, Frederick Arthur	Fairmont	Sen., B. S. Agr.
Bradley, John Junius	Knoxville, Tenn.	Jun., B. S. M. E.
Brady, James Zell	Fairmont	Fr., A. B.
Bragonier, Arthur Taylor	Morgantown	Grad., Eng'g.
B. S. C. E., West Virginia University, 1916		
Brand, Beulah Grace	Morgantown	Sen., A. B.
Brand, Gail	Morgantown	Sen., B. S. H. E
Brandenburg, Mabel	Belington	Fr., A. B.
Brant, Joe Lester	Lewisburg	Voc., Agr.
Braun, Arpad	Cleveland	2nd Yr., Med.
Bray, Albert Bertram Calfee, Jr.	Ronceverte	*Fr., A. B.
Bright, Nona Mary	Flatwoods	Fr., A. B.
Bright, Percy Wade	Sutton	Fr., A. B.
Broadwater, Theodore Verne	Belington	Grad., A. & S.
Grad., A. & S., 1921		
Brock, Josephine	Summersville	*Fr., A. B.
Brock, Mary Emily	Blacksville	Fr., A. B.
Brohard, Encil Ray	Fairview	Jun., B. S. Agr.
Brooks, Florence Marian	Buckhannon	Sen., B. S. H. E.
Brooks, Frank See	Morgantown	Spl. Eng'g.
Brooks, Margaret	Martinsburg	*Fr., B. S. H. E.
Brooks, Maurice Graham	French Creek	Jun., A. B.
Brown, Elizabeth	Morgantown	Soph., A. B.
Brown, Frank Orcutt	Charleston	Jun., B. S. Ch. E.
Brown, Garrett Fairfax	Kingwood	Fr., A. B.
Brown, Hugh Wayne	Lumberport	Fr., A. B.

Brown, James Willard	Albright	1st Yr., Med.
Brown, John Harold	Independence	Fr., A. B.
Brown, Joseph Charles	Nallen	*Fr., B. S. E. E.
Brown, Oral Ala	Stout's Mills	Soph., B. S. E. E.
Brown, Paul Wilbert	Wilkinsburg, Pa.	*Fr., A. B.
Brown, Ross Duncan	Fairmont	Sen., B. S. E. E.
Brown, Samuel Byrne	Morgantown	Soph., B. S. E. M.
Brown, William James	New Cumberland	Fr., A. B.
Browning, Chauncey Hoyt	Logan	Soph., A. B.
Browning, Virginia Maude	Morgantown	Jun., B. S. H. E.
Bruffey, Archie J.	Pullman	Fr., A. B.
Bruffey, James Barnard	Pullman	Soph., A. B.
Bryan, James Fred	Parkersburg	*Fr., A. B.
Buchovecky, John	Johnstown, Pa.	*Fr., B. S. E. E.
Buck, Walter Edwin	Sistersville	*Fr., A. B.
Buckley, Ralph Barnette	Buckeye	Soph., B. S. Agr.
Buitrago, Eugenio. Jr.	Guayama, P. R.	Fr., B. S. M. E.
Bunten, Thomas Ellsworth	Morgantown	Fr., B. S. Ch. E.
Bunting, John William	Sistersville	Fr., A. B.
Burdette, Frank	Lewisburg	Jun., B. S. Ch. E.
Burk, Helen Elizabeth	Morgantown	Sen., A. B.
Burkhardt, Marie Louise	Morgantown	Sen., B. S. H. E.
Burley, William James	Moundsville	Sen, A. B.
Burns, James Francis	Fairmont	2nd Yr., Law
A. B., West Virginia University, 1921		
Burns, Margaret	Terra Alta	1st Yr., Phar.
Burns, Mary Margaret	Fairmont	Jun., B. S. H. E.
Burnside, Lester Wade	Lost Creek	Soph., A. B.
Burnside, Marian Elizabeth	Point Pleasant	Fr, A. B.
Burnside, Mary Elizabeth	Point Pleasant	Soph., A. B.
Burton, Pauline Dick	Charles Town	Sen., A. B.
Bush, Bonnie Belva	Cox's Mills	Jun., A. B.
Bushnell, Marshall Ernest	Dedham, Mass.	*Fr., B. S. E E.
Butler, Berda Lynch	Morgantown	Grad., A. & S.
A. B., West Virginia University, 1921		
Butler, James Dalzell	Hedgesville	Jun., A. B.
Butler, Stanley Cornealius	Huntington	Sen., B. S. Agr
Butts, Randolph Henry	Wheeling	Soph., B. S. C. E.
Cadden, James Joseph	Keyser	Jun., B. S. Agr.
Cadden, John Francis, Jr.	Keyser	*Fr., A. B.
Cain, Harry E.	Morgantown	Sen., B. S. M. E.
Cairns, Jennie Lenore	Charleston	Soph., A. B.
Caldwell, Nellie Bruce	Athens	Soph., A. B.
Callaghan, Eulai Brooks	Craigsville	Fr., A. B.
Callahan, Paul Ronald	Hinton	*Fr., B. S. E. E.
Calvert, Carmen Corabelle	Morgantown	Jun., A. B.
Calvert, Elsmere Carleton	Morgantown	Fr., B. S. M. E.
Calvert, James William	Morgantown	Soph., A. B.
Campbell, Florence Fae	Newburg	Jun., B. S. H. E.
Campbell, Forrest Wood	Huntington	Soph., B. S. C. E.
Campbell, Harley Wilson	Sand Fork	Voc., Agr.
Campbell, Mary Blanche	Morgantown	Soph., A. B.
Campbell, Orman Crawford	Princeton	Soph., A. B.
Canfield, Cecil	Sutton	Voc., Agr.
Cantner, Claire Cecil	Harrisville	Soph., B. S. E. E.
Cantrall, Archibald Martin	Morgantown	Sen., A. B.

Caperton, Erskine Miller	Charleston	Fr., B. S. E. M.
Carden, Charles Stephenson	Weston	Jun, B. S. C. E.
Carden, Howard Rader	Zela	Fr., A. B.
Carder, Joseph Ray	Bristol	Sen., A. B.
Carey, Robert Glenn	Toronto, Ohio	Fr., A. B.
Carnes, Wilbur Clement	Clendenin	Fr., A. B.
Carney, Dorothy May	Morgantown	*Fr., A. B.
Carney, Harry Everett	Wick	*Fr., A. B.
Carney, Harry Gordon	Lumberport	1st Yr., Phar.
Carpenter, Simon William	Buckhannon	Grad., A. & S.
Carrico, Ethel Davis	Terra Alta	Soph., B. S. H. E.
Carrico, Margaret Augusta	Rowlesburg	*Fr., A. B.
Carroll, Arlo Bowlby	Morgantown	Sen., B. S. Agr.
Carskadon, Fred Leps	Headsville	*Fr., A. B.
Carson, Everett	Rockport	Voc., Agr.
Carter, Bethanne	Mannington	Jun., A. B.
Carter, Emily Brown	Elm Grove	Fr., B. S. H. E.
Carter, Ida Virginia	Elm Grove	Jun., A. B.
Carter, Lester Jennings	Clarksburg	*Fr., A. B.
Carter, Robert Moore	Mt. Hope	Soph., B. S. M. E.
Cash, Raymond Walter	Follansbee	*Fr., B. S. E. E.
Casseday, John Forman	Terra Alta	3rd Yr., Phar.
Castleberry, Edith Frances	Huntington	Soph., A. B.
Casto, Dale George	Ripley	Jun., A. B.
Casto, Ronald Herman	Kenna	*Fr., A. B.
Casto, Wendell Ewing	Ripley	Soph., A. B.
Cather, Harold Malcolm	Morgantown	Grad., Eng'g.
B. S. M. E., Texas A. & M. College, 1917.		
Cather, John Duane	Flemington	Sen., B. S. Agr.
Cather, Nellie Maude	Keyser	Fr., A. B.
Cavendish, Joseph Henry	Huntington	Soph., A. B.
Chabourel, Alfred	Morgantown	*Fr., B. S. E. E.
Chadduck, James Donald	Grafton	Jun., A. B.
Chalfant, Leslie Homer	Morgantown	Jun., B. S. E. M.
Chambers, Pearl Adena	Moundsville	Soph., A. B.
Chambers, Vannetta	Martinsburg	Jun., A. B.
Chandler, Hudson	St. Albans	Sen, B. S. E. E
Chapman, John Frederick	Davis	Fr., B. S. E. E.
Chapman, Robert Clifton	Charleston	Fr., A. B.
Charlton, Harry Jr	Bluefield	Soph., A. B.
Charnock, John Nichols	Charleston	1st Yr., Law
Chenoweth, John Earl	Warriors Mark, Pa.	Voc., Agr.
Chenoweth, Perthas	Wendel	Fr., A. B.
Cheshire, Helen Katheryn	Keyser	Fr., A. B.
Chrislip, Walter Grant	Philippi	2nd Yr., Phar.
Chrisman, Robert Ralston, Jr.	Morgontown	Jun., B. S. M. E.
Christopher, Margaret Bethia	Morgontown	Soph., A. B.
Christopher, Rachael Gertrude	Morgontown	Soph., A. B.
Christy, Mary Louise	Morgontown	Sen., B. S. H. E.
Clark, Asa	Morgontown	Soph., A. B.
Clark, Ethel Jordan	Folsom	Fr., A. B.
Clark, Zelith Alfonso	Thomas	Jun., A. B.
Clarke, Alice Williamson	Graham Sta.	Soph., A. B.
Clarke, Nancy Dorothy	Sistersville	Sen., A. B.
Clarke, Presley Wilmott	Graham Sta.	Jun., A. B.
Clarke, William Russell	Wheeling	*Fr., A. B.

Clarke, Winifrede Gibbs	Graham Sta.	Fr., A. B.
Clevenger, Eugene Lester	Keyser	*1st Yr., Phar.
Clovis, Hayward Edgar	Pennsboro	Fr., A. B.
Clower, James Ira	Romney	Jun., B. S. M. E.
Cobb, Elihu Hutton	Elkins	Fr., B. S. E. E.
Cobun, Frank Sanford	Morgantown	Soph., B.S.Ch.E.
Cochran, John Kermit	St. Marys	*Fr., B. S. M. E.
Cochran, Philip James	Morgantown	Sen., A. B.
Coe, Robert	Ellsworth, Pa.	Fr., B. S. E. E.
Coen, Charles Silver	St. Marys	*Fr., B. S. E. E.
Coffindaffer, Ernest Wayne	Jane Lew	Grad., Agr.
B. S., Agr., West Virginia University, 1916		
Coffindaffer, Russell Smith	Jane Lew	Sen., A. B.
Coffman, Edward Goodwin	Mannington	Soph., A B.
Coffman, Harold Goodwin	Mannington	Fr., B. S. C. E.
Cogar, Leo	Webster Springs	*Fr., A. B.
Cokeley, Addie May	Pennsboro	Soph., B. S. H. E.
Cokeley, Clara McMillen	Morgantown	Soph., B. S. H. E.
Colcord, Trustram Coffin	St. Albans	Sen., B. S. E. M.
Cole, Blanche	Morgantown	Fr., A. B.
Cole, Catherine Wilson	Morgantown	*Fr, A. B.
Cole, Mamie Marie	Morgantown	*Fr., A. B.
Cole, Richard Lewis	Shinnston	*Fr., B. S. M. E.
Cole, Virginia Garrison	Wadestown	*Fr., A. B.
Colebank, Harry George	Parsons	Fr., B. S. C. E.
Coleman, John Dawson	Clarksburg	Fr., B. S. C. E.
Coleman, John William	Victor	Soph, B. S. Agr.
Colla, Joseph	Youngstown, Ohio	1st Yr., Med.
Collett, Walter Eugene	Clarksburg	Fr., A. B.
Collins, Aletha Alice	Huntersville	Fr., Phar.
Conaway, Edmund Macaulay	Board Tree	Soph., A. B.
Conaway, Harrison	Fairmont	Fr., A. B.
Condry, Raphael Joseph	Clarksburg	Soph., A. B.
Conley, Donald Martin	Charleston	*Fr., B. S .C. E.
Conway, Charles Hughston	Morgantown	Fr., A. B.
Cook, Alice Virginia	Cameron	Jun., A. B.
Cook, Alvin Jenner	Beckley	Sen., A. B.
Cook, John Roach	Fairmont	Jun., B. S. E. F.
Cooper, Aubyn Bailey	Bellaire, Ohio	Fr., A. B.
Cooper, Chalmer Lewis	Parkersburg	Jun., B. S. E. M.
Cooper, Cora	Parkersburg	Soph, A. B.
Cooper, Elizabeth	New Cumberland	Fr., A. B.
Copley, James Samuel	Logan	Soph., B. S. E. E.
Corathers, Robert Paul	Weston	*Fr., B. S. E. E.
Corbitt, Gordon Page	Waverly	Soph., A. B.
Core, Arthur Lynn	Core	Fr., B. S. Agr.
Core, Ella	St. Marys	Fr., A. B.
Core, Jessie Louise	Cassville	Soph., B. S. H. E.
Core, Rose Belle	Cassville	Jun., A. B.
Cornell, Ferris Dewey, Jr.	Binghamton, N. Y.	Grad., A. & S.
B. S., Syracuse University, 1919		
Costelow, Dora	Tunnelton	Soph., A. B.
Cottle, Samuel Walter	Spencer	1st Yr., Med.
Cottrill, Joseph Charles	Mannington	Jun., B. S. Agr.
Cotts, Clifford Harry	Elm Grove	Jun., B. S. C. E.
Coulson, Thomas Blaides	Morgantown	Voc., Agr.

Counts, William Ralph	Welch	Soph., A. B.
Courtney, DeWitt Gibner	Charleston	Soph., A. B.
Cox, Elizabeth Jane	Wheeling	Fr., A. B.
Cox, Floyd Brooks	Morgantown	Grad., A. & S.
A. B., West Virginia University, 1918		
Cox, Osa Linell	Clarksburg	Soph., A. B.
Coyner, Jacob Ligon	Clover Lick	Fr., A. B.
Coyner, Littleberry Netherland	Clover Lick	*Fr., B. S. Agr.
Craddock, Hugh Harvey	Weston	Fr., A. B.
Craig, Frank Waldo	Tunnelton	Jun., B. S. Agr.
Crandall, Charles Dewey	Parkersburg	Soph., A. B.
Crane, Lillian	Morgantown	Fr., B. S. H. E.
Craver, Kenneth Clarence	Wheeling	*Fr., A. B.
Crawford, Thomas Stephen	Fairmont	B. S. Ind. En'g.
Crawford, Virginia	Sistersville	Soph., A. B.
Cree, George Fletcher	Wellsburg	Sen., A. B.
Creighton, John Seamon	Elm Grove	Sen., B. S. Agr.
Crim, Lloyd DeWitt	Ronceverte	Grad., Agr.
B. S., Agr, Ohio State University, 1916		
Cromer, Viris Yather	Haywood	*Fr., B. S. C. E.
Crossland, Howard Young	Arrow, Pa.	Sen., A. B.
Crow, George Burton	Ripley	Fr., A. B.
Crow, Harry L.	Cameron	Voc., A. & S.
Crush, Robert Glenn	Fairmont	*Fr., B. S. E. E.
Cunningham, George Norman	Wheeling	Fr., A. B.
Cunningham, Herbert Isaac	Pennsboro	Fr., A. B.
Cure, Mortimer Daniel, Jr.	Weston	Jun., B. S. E. M.
Currence, Lilburn Philip	Clarksburg	Fr., A. B.
Currence, Troy Mansell	Ellamore	Jun., B. S. Agr.
Current, Howard Wesley	Thornton	2nd Yr., Med.
Current, Wilbur Russell	Thornton	Soph., B.S. Ind.E.
Curtin, Henry Webster	Clarksburg	Fr., A. B.
Cutright, Marjorie Minerva	Adrian	Fr., A. B.
Cutright, Paul Russell	Adrian	Grad., A. & S.
A. B., West Virginia University, 1921		
Cypher, James David	Connellsville, Pa.	*Fr., A. B.
D'Agostino, Joseph	Morgantown	*Fr., B. S. E. E.
Dague, Carrie Maude	Elm Grove	Grad., A. & S.
A. B., West Virginia University, 1909		
Dailey, Earl Leora	Morgantown	Soph., A. B.
Dailey, Ethel Armentrout	Morgantown	*Fr., A. B.
Dailey, Lorenz Adair	Terra Alta	Fr., A. B.
Damron, Bertie Lee	Williamson	*Fr., A. B.
Damron, James Russell	Williamson	*Fr., A. B.
Daniel, Gilbert Alexander	Athens	Soph, A. B.
Daniel, Ross Preston	Glen Daniel	1st Yr., Med.
Daniels, Elsie Ruth	Parsons	Soph., B. S. H. E.
Daniels, Harold Chancey	Parsons	Sen., B. S. E. E.
Darling, Anna Beele	Morgantown	Grad., A. & S.
A. B., West Virginia University, 1919		
Darlington, Hollie Clayton	Wriston	Jun., A. B.
Dasher, William Cowger	Moorefield	Fr., B. S. E. E.
Daughenbaugh, Paul Jones	Thomas	Soph., A. B.
Daugherty, Grattan Mitchell	Hinton	2nd Yr., Law.
A. B., West Virginia University, 1921		

Daugherty, Norma Regina	Hinton	Soph., B. S. H. E.
Davenport, Benton Stevenson	Charleston	*Fr., B. S. M. E.
Davia, Faustina Decarlo	Monongah	Sen., A. B.
Davies, Thomas Charlton	Ironton, Ohio	Soph., A. B.
Davis, Cabell Seal	Pence Springs	Soph., A. B.
Davis, Charles Henry, Jr.	Chester	Voc., Eng'g.
Davis, Charles Norman	Mannington	Soph., B. S. E. E.
Davis, Hannibal Albert	Morgantown	Jun., A. B.
Davis, Harry Caperton	Pence Springs	Fr., A. B.
Davis, Hubert Beryl	Weston	Soph., B. S. Agr.
Davis, James Foxworthy	Princeton	Soph., A. B.
Davis, John Blaine	Hillsville	Voc., Agr.
Davis, Lowell Smith	Morgantown	Fr., B. S. E. E.
Davis, Maude Ellen	Flatwoods	Fr., B. S. H. E.
Davis, Waveline Myrtle	Cowen	*Fr., A. B.
Davis, William Allan	Parkersburg	Soph., B. S. C. E.
Davis, William Russell	Parkersburg	*Fr., B. S. E. M.
Davisson, Edwin George, Jr.	Weston	Fr., A. B.
Dawson, Perry Ray	Weston	Fr., A. B.
Deahl, Kenneth	Newburg	Soph., B. S. C. E.
Deal, Thomas Clausen	Elkins	*Fr., B. S. E. E.
De Carlo, Tony	Monongah	Fr., A. B.
Deem, Homer Leander	Slate	Jun., A. B.
De Laughter, Sallie America A. B., Winthrop College, 1918	N. Augusta, S. C.	Grad., A. & S.
De Main, Catherine Hope	Morgantown	Fr., A. B.
Demarrie, Tony	Manayka	Jun., A. B.
Dennison, Raymond Lewis	Wallace	Jun., B. S. Agr.
De Pue, James Marshall	Morgantown	Sen., B. S. Agr.
De Pue, Thomas Norris	Morgantown	Soph., B. S. Agr.
De Vaughn, Floyd Gilbert	Morgantown	*Fr., A. B.
De Vaughn, Katheryn Irene	Morgantown	*Fr., A. B.
De Verbre, Elmer Witt	Ronceverte	Soph., B. S. E. E.
Devericks, Bertie William	Clarksburg	Soph., B. S. E. M.
Dewar, Maud Margaret	Parkersburg	Jun., B. S. H. E.
Di Benedetto, Mitchell Michael	Brooklyn, N. Y.	1st Yr., Med.
Dickinson, Minnie Lee	Cheat Haven, Pa.	Soph., A. B.
Dickman, Harold Joseph	Wheeling	Sen., B. S. C. E.
Dilcher, Charles Fischer	Charleston	Fr., A. B.
Dixon, Joseph Brashear	Morgantown	Sen., B. S. Agr.
Dodrill, Everett Lewis	Morgantown	Jun., A. B.
Dolan, Lee Michael	Clarksburg	Fr., A. B.
Dolan, David Joseph	Manhattan, N. Y.	1st Yr., Med.
Doll, Harry Lee	Martinsburg	Fr., A. B.
Dolley, Eunice Pennington	Gastonia, N. C.	Jun., A. B.
Dolly, Olie Corbett	Key	Voc., Agr.
Donaldson, Dorothy Marietta	New Martinsville	Fr., B. S. H. E.
Donham, Paul Ernest Jennings	Fairmont	Jr., A. B.
Donley, David Edward	Davistown, Pa.	*Fr., B. S. Ch. E.
Donley, Robert Tucker	Morgantown	Soph., A. B.
Donally, Fitzhugh	Charleston	Sen., B. S. E. E.
Donovan, Charles Andrew	Charleston	Fr., A. B.
Donovan, Ruth Davis	Huntington	Jun., B. S. H. E.
Doolittle, Lambert McChesney	Huntington	3rd Yr, Law
Dornick, Edward Lucian	Huntington	Soph., B.S.Ch.E.
Dorr, Charles Philip	Morgantown	*Fr., A. B.

Dorsey, Arch	Moundsville	Fr., A. B.
Dotson, Gertrude	Richwood	Jun., A. B.
Dougherty, John Edwin	Elkins	2nd Yr., Med.
Dower, Theresa Averil	Pt. Pleasant	Soph., A. B.
Dowling, Goethe Evelyn	Piedmont	Soph., A. B.
Downes, John Dixon	Buckhannon	1st Yr., Law
Dubois, Florian Peter	Morgantown	Fr., B. S. E. E.
Dudley, Harold Guilford	Sistersville	Jun., B. S. M. E.
Dudley, Lysander	Parkersburg	Fr., A. B.
Duffield, Genevieve	Sutton	*Fr, B. S. H. E.
Duffield, Gertrude Jean	Sutton	Fr., A. B.
Dufrene, Marie Irene	Wheeling	Fr., A. B.
Dunagan, Carlos	Mt. Lake Park, Md.	Soph., A. B.
Duncan, George Andrew	Clarksburg	Fr., A. B.
Duncan, John Dale Derrington	Thomas	*Fr., A. B.
Dunleavy, George Joseph	Gary, Ind.	*Fr., A. B.
Dunn, Jasper McDowell	Morgantown	Sen., B. S. Agr.
Durrett, Eleanor Jean	Morgantown	*Fr., A. B.
Durrett, Ethel Clare	Morgantown	*Fr., A. B.
Duthie, Grace Irene	Clarksburg	Soph., A. B.
Duty, William Ralph	Alma	Fr., A. B.
Dye, Arthur Pingree	Morgantown	Jun., B. S. Agr.
Dyer, John Rush	Webster Springs	2nd Yr., Law
Dyer, Newman Houghton	Morgantown	Jun., A. B.
Eagan, Stewart	Ronceverte	Soph., B. S. E. E.
Eakin, Armstrong	Morgantown	Jun., B. S. M. E.
Eakle, Earl Lough	Clay	Sen., A. B.
Eastwood, Mildred Martin	Charleston	Fr., A. B.
Eberhart, Willis Herbert	Pt. Marion, Pa.	Fr., B. S. M. E.
Eckleberry, Richard Delbert	Newell	*1st Yr., Phar.
Edmondson, Gladys Chastaigne	Morgantown	Sen., A. B.
Edwards, Laurens Frank	Charleston	Fr., B. S. M. E.
Edwards, Violet Nancy	Parkersburg	Fr., B. S. H. E.
Elks, Paul Menken	Belmar, N. J.	Soph., A. B.
Ekberg, Gustav Anthony	Robbins Dale, Minn.	Soph., A. B.
Elkins, Dallas Harold	Charleston	*Fr., B. S. Ch. E.
Elliott, Allen McKinley	Elm Grove	Fr., B. S. Agr.
Emch, John William	New Martinsville	Jun., B. S. E. M.
Emery, Blanche Frances	Kirksville, Mo.	Grad., A. & S.
A. B., West Virginia University, 1913		
Emsweller, Samuel Leonard	Morgantown	Sen., B. S. Agr.
England, Arline Isis	Charleston	Soph., A. B.
England, Welch	Athens	1st Yr., Med.
Enigson, Edward	Morgantown	Soph., B. S. M. E.
Ernest, Charles David Fairfax	Belington	Soph., B. S. E. E.
Eselhorst, Albert Robert	Baltimore, Md.	Voc., Phar.
Estep, Trent Sylvanus	Clendenin	Fr., A. B.
Etz, Eugene Charles	Wheeling	Soph., A. B.
Evans, Benjamin	Morgantown	Fr., B. S. C. E.
Evans, Eugene Everly	Morgantown	Grad., A. & S.
B. S., West Virginia University, 1912		
Evans, James Carlos	Kermit	Soph., B. S. C. E.
Everly, Marguerite	Morgantown	Fr., B. S. H. E.
Everly, Paul Darlington	Kingwood	Fr., B. S. E. M.
Everly, Walter	Maidsville	Voc., Agr.
Evosovic, William Michael	Steubenville, O.	*Fr., B. S. C. E.

Ewing, Clara Pyle	Harrisburg, Pa.	Sen., A. B.
Fahey, Patrick Joseph	Freemansburg	Fr., A. B.
Fahey, Willis Howard	Wheeling	Soph., A. B.
Fair, Grace Cecelia	Wallace	Soph., B. S. H. E.
Faris, Eleanor Elizabeth	Wheeling	Fr., A. B.
Farmer, George Robert	Morgantown	3rd Yr., Law
Farmer, John Dunn	Bolt	B. S. Agr.
A. B., West Virginia University, 1916		
Farnsworth, Hudson Fidler	Buckhannon	Jun., B. S. Agr.
Fassberg, Florence	Pittsburgh, Pa.	1st Yr., Med.
Faulkner, Lynn Tecumseh	Morgantown	Soph., B. S. E. E.
Feather, Paul Anthony	Fairmont	*Fr., B. S. M. E.
Feather, Ray Everett	Smithfield, Pa.	Fr., A. B.
Federer, George Andrew, Jr.	Morgantown	Grad, A. & S.
A. B., West Virginia University, 1920		
Fehrenbach, Howard Wilson	Wheeling	1st Yr., Law
Feinberg, Nathan Benjamin	New York, N. Y.	1st Yr., Med.
Fenimore, Albert Clarence	St. Albans	Fr., B. S. E. M.
Fenton, Clement Coleman	Cambridge, Mass.	1st Yr., Med.
A. B., Columbia University, 1915		
Ferguson, Milton Carr	Huntington	Soph., A. B.
Ferguson, Robert Harrison	Middlebourne	*Fr., A. B.
Ferguson, Samuel James	Wayne	2nd Yr., Med.
Fervier, Ralph Joseph	Manayka	2nd Yr., Phar.
Fickes, Marjorie Elizabeth	New Cumberland	Fr., A. B.
Fidler, Kemp A.	Tioga	Soph., A. B.
Field, Helen Preston	Huntington	Sen., A. B.
Field, Lillian Tudelle	Huntington	*Fr., A. B.
Fiess, Paul Lewis	New Martinsville	*Fr., A. B.
Fife, Frances Elizabeth	Morgantown	Jun., A. B.
Finegold, Abraham	Carnegie, Pa.	2nd. Yr., Med.
Finnell, Robert Blackman	Keyser	Soph., A. B.
Fisher, Dana Earl	Morgantown	Jun., A. B.
Fisher, Edgar Maxwell	Morgantown	Soph., B.S.Ch.E.
Fisher, Helen Frances	Morgantown	Fr., B. S. H. E.
Fisher, Marjorie Pfost	Morgantown	1st Yr., Phar.
Fisher, Mary Bailey	Morgantown	Fr., B. S. H. E.
Fisher, Mary Elizabeth	Sutton	Soph., A. B.
Fisher, Ruth	Sutton	Sen., A. B.
Fisher, William Glenn	Flatwoods	Soph., B. S. Agr.
Fitch, James Plummer, Jr.	Morgantown	Jun., A. B.
Fitch, Thomas Simon Paddock	Plainfield, N. J.	1st Yr., Med.
Flanagan, Joseph Frank	Buckhannon	*Fr., B. S. Agr.
Flanegan, Charles Albert	Uniontown, Pa.	*Fr., B. S. M. E.
Fleming, Florence Rosalean	Grafton	Soph., A. B.
Fleming, Joseph Arch	Fairmont	Soph., A. B.
Fleming, Ruth Sprague	Morgantown	Jun., A. B.
Flesher, Clinton Wellrose, Jr.	Gassaway	*Fr., B. S. M. E.
Fleshman, Pauline Anna	Blue Sulphur Spgs.	Jun., B. S. H. E.
Fletcher, John Carroll	Charleston	Fr., B. S. M. E.
Fluharty, Ira	Piney	*Fr., A. B.
Fockler, Hubert Haymond	Persinger	*Fr., A. B.
Foley, Louis Putnam	Connellsville, Pa.	Sen., A. B.
Folmar, Harold William	Elm Grove	*Fr., A. B.
Foose, Alphonse Maurice	Morgantown	Sen., A. B.
Foose, Ruby Calvert	Morgantown	Sen., A. B.

Forastieri, Jose Arturo	Caquas, P. R.	Soph., A. B.
Forbes, Margaret Louise	Morgantown	*Fr., A. B.
Ford, Aubrey Eugene	Huntington	Jun., B. S. Ch. E.
Ford, Eli Hester	Virgilina, Va.	Voc., Agr.
Ford, Euphama Frances	Independence	*Fr., A. B.
Ford, Orfa Rex	Salem	Grad., A. & S.
B. S., Salem College, 1915		
Ford, Vada Margaret	Sistersville	Fr., A. B.
Ford, William Richard	Alderson	*Fr., B. S. E. E.
Fordyce, Cless Yelving	Middlebourne	Sen., A. B.
Forman, Neil Strecker	Morgantown	*Fr., B. S. C. E.
Forman, Pauline Fae	Morgantown	Fr., A. B.
Forman, Theodore McClelland	Morgantown	Soph., B. S. E. E.
Fortney, Alton Ree	Thomas	Soph., A. B.
Fortney, Jessie Rogers	Morgantown	Sen., B. S. H. E.
Fouchs, Lawrence Earl	New Martinsville	Soph., A. B.
Fowler, Emmett George	Pt. Pleasant	Jun., B. S. Agr.
Fowler, Glenn Aubert	Harrisville	Jun., B. S. Agr.
Fox, Grace Alverda	Morgantown	Fr., A. B.
Fox, Herman Vance	Sutton	Fr., A. B.
Frame, Luke Wright	Morgantown	Jun., B. S. Agr.
Frame, Wilbur Conan	Morgantown	1st Yr., Law
Frankenburger, Roy Taylor	Morgantown	Jun., B. S. M. E.
Frazier, Archie James	Wheeling	Voc., Agr.
Frazier, Hartsel Floyd	Jane Lew	Fr., A. B.
Frederick, Walter Miller	Fairchance, Pa.	Fr., B. S. E. E.
Fredlock, James Ray	Piedmont	Fr., A. B.
Frees, John Charles, Jr.	Wheeling	Fr., A. B.
French, David Edwin, Jr.	Bluefield	Fr., A. B.
French, James Hoagland	Welch	2nd Yr., Law
Fretwell, Harry Gordon	Clarksburg	*Fr., A. B.
Friend, Mary Mildred	Morgantown	Soph., A. B.
Friend, Wayne Zearley	Charleston	Soph., B.S.Ch.E.
Frum, Mary Alice	Morgantown	Jun., A. B.
Fuccy, Lewis J.	Weston	Fr., A. B.
Fullerton, Max Robe	Morgantown	Fr., A. B.
Funk, Fred Jack	Fairmont	Soph., B. S. E. E.
Furbee, Lloyd Charles	Ravenswood	Grad., Agr.
B. S. Agr., West Virginia University, 1921		
Fusco, Patrick Joseph	Niles, Ohio	1st. Yr., Med.
Fuss, Harry Luther	Cherry Run	Fr., A. B.
Gaetaniello, James	Morgantown	1st Yr., Med.
Gain, Charles Grantham	Romney	Jun., A. B.
Gaines, Teresa Barbe	Bridgeport	Soph., A. B.
Gamble, Mortimer Williams, Jr.	Moorefield	Fr., A. B.
Gamble, Robert Mortimer	Moorefield	*1st Yr., Phar.
Gandy, Mary Helen Cobun	Morgantown	Jun., A. B.
Ganer, Ernest Leslie	Philippi	Fr., B. S. C. E.
Gans, Mary Elizabeth	Gans, Pa.	Soph., B. S. H. E.
Garcia, Georgina	Arecibo, P. R.	Fr., B. S. H. E.
Gardner, Arthur Maitland	Morgantown	Soph., B. S. M. E.
Gardner, Emma Esther	Cowen	*Fr., A. B.
Gardner, Sigel Ona	Blacksville	Jun., A. B.
Garland, Samuel Meredith	Amherst, Va.	Voc., Agr.
Garred, Herbert David	Charleston	*Fr., A. B.
Garrett, James William	Flemington	Soph., A. B.

Garrison, William McKinley	Moundsville	Voc., Agr.
Garrity, Edward Fabian	West Union	*Fr., B. S. E. E.
Gaskin, Catherine Holmes	Monongah	Jun., A. B.
Gaston, William Bryan	Clarksburg	Jun., A. B.
Gates, Cecil Raymond	Morgantown	Jun., A. B.
Gates, George	Parkersburg	*Fr., B. S. E. E.
Gates, Mildred Carrie	Fairchance, Pa.	Jun., A. B.
Gawthrop, Robert Earle	Bridgeport	Fr., A. B.
Geiger, William Edward	Brooklyn, N. Y.	2nd Yr., Med.
Geldzahler, Louis Jesse	New York, N. Y.	1st Yr., Med.
George, Edward Metcalf	Wellsburg	Jun., A. B.
George, Eric Clinton	Mt. Hope	Soph., B. S. E. M.
Gerwig, Charles Olin	Chapel	Sen., B. S. C. E.
Gibbons, Charles Allen	Morgantown	Jun., B. S. E. M.
Gibson, Ernest Byron	Masontown	*Fr., A. B.
Gibson, Howard Joseph	Masontown	Fr, A. B.
Gibson, James Knox	Triadelphia	1st Yr., Med.
Gibson, Mary Blanche	Sutton	Sen., A. B.
Gidley, Bertha Irene	Morgantown	Fr., A. B.
Griffin, Louis McAllister	Fairmont	Fr., B. S. C. E.
Gifford, Clella Maud	Wilsonburg	Soph., A. B.
Gifford, Warren	Wallace	Sen., B. S. Agr.
Gifford, Worthy Herschel	Wallace	Fr., A. B.
Gillie, Percy Henry	Charleston	Fr., B. S. Ch. E.
Gilmore, Virginia	Morgantown	Sen., B. S. H. E.
Given, Arnold Jarrett	Elkview	2nd Yr., Med.
Given, Ivan Allen	Sutton	Fr., B. S. E. M
Givens, Grace Hopkins	Keenan	Jun., A. B.
Givens, William Wiley	Keenan	Grad., Agr.
A. B., West Vigrinia University, 1915		
Glassman, Joseph	Brooklyn, N. Y.	1st Yr., Med.
Glenn, Louise Elizabeth	Clarksburg	Soph., A. B.
Glisan, Elsie Marie	Morgantown	Soph., A. B.
Godfrey, Allie Howard	Cairo	Sen., A. B.
Goff, Harvey Claude	Morgantown	Sen., B. S. Agr.
Goff, John Trevy	Burnt House	2nd Yr., Med.
Goldberg, Rudolph	New York, N. Y.	2nd Yr., Med.
Golden, Marvin Luther	Flatwoods	Soph., A. B.
Golden, Vera Mae	Bridgeport	*Fr., A. B.
Goldsborough, Margaret Griffina	Romney	*Fr., A. B.
Golembe, Julius	New York, N. Y.	2nd Yr., Med.
Goodall, Cecil Roberta	Charleston	Soph., A. B.
Goodall, Elizabeth Jane	Charleston	Soph., A. B.
Gooding, Forrest Nelson	Terra Alta	Grad., Agr.
B. S. Agr., West Virginia University, 1921		
Goodnough, Leona Edwina	Wheeling	Sen., A. B.
Goodwin, George Reay	Morgantown	Fr., A. B.
Gorman, William Ambrose	Grafton	*Fr., A. B.
Gorman, Winnie Elizabeth	Morgantown	Soph., B. S. H. E.
Gorrell, Earl Lewis	Sistersville	*Fr., A. B.
Goucher, Mahrea Louise	Toronto, Ohio	Jun., A. B.
Gould, Mary Pearle	Williamstown	Sen., A. B.
Graham, Amy Catherine	Fairmont	Soph., B. S. H. E.
Graham, Fred Hartley	Morgantown	*Fr., A. B.
Graham, Gus Bomar	Morgantown	Jun., B. S. C. E.
Gramm, Frederic Wagner	Charleston	Fr., B. S. E. E.

Gray, Leura	Cameron	Soph., B. S. H. E.
Greathouse, Virgil Dail	Morgantown	*Fr., B. S. C. E.
Green, Lawrence Westley	Buckhannon	Fr., A. B.
Greer, Creed Collins	Parkersburg	Fr., A. B.
Greer, Fred Charles	Martins Ferry, O.	Fr., A. B.
Greer, Joseph William	Fairmont	Soph., A. B.
Gregory, Emerson Orvil	Cowen	*Fr., A. B.
Gribble, Anna Merle	Morgantown	Fr., A. B.
Griffith, George Oscar	Grafton	Sen., A. B.
Grosof, William	Brooklyn, N. Y.	1st Yr., Med.
Gross, Paul Thomas	Morgantown	Sen., A. B.
Gross, Ralph Christy	Morgantown	Fr., A. B.
Groves, Huling	Deepwell	Soph., A. B.
Grow, Buel King	Williamstown	*Fr., A. B.
Gruber, Harry Neidhart	Morgantown	Jun., B. S. Agr.
Guiher, Mary Melissa	Smithfield, Pa.	Sen., A. B.
Gunning, Eugene Thomas	Cumberland, Md.	Jun., A. B.
Guthrie, Robert Fleetwood	Charleston	Voc., Agr.
Guyer, Grover Cleveland	Brandywine	Voc., Agr.
Haas, Joseph Sanders	Fairmont	*Fr., B. S. Ch. E.
Haberlin, Chester Edward	Bridgeport, Conn.	2nd Yr., Med.
Hagan, Edward Franklin	Hundred	Soph., B. S. E. M.
Haines, Margaret Anne	Perryopolis, Pa.	Sen., A. B.
Haislip, Norval Leonard	Parkersburg	Soph., A. B.
Hale, Grace	Weston	Soph., A. B.
Hall, Belle Protzman	Morgantown	Fr., B. S. H. E.
Hall, Byron William	Sutton	Fr., B. S. Ch. E.
Hall, Cecil Maurice	Hinton	1st Yr., Med.
Hall, Clyde Hampton	Holstead	Fr., A. B.
Hall, Edward Carlton	Morgantown	*Fr., B. S. M. E.
Hall, Edwin Reynear	Sutton	Fr., B. S. M. E.
Hall, Faye	Amburn	Soph, A. B.
Hall, Frank Leroy	Morgantown	2nd Yr., Med.
Hall, Grant Pierson, Jr.	Charleston	Fr., A. B.
Hall, John Ruskin	Weston	Grad., A. & S.
A. B., Otterbein University, 1914.		
Hall, Orbia	Auburn	Soph., A. B.
Hall, Ralph Herman	Harrisville	*Fr., B. S. C. E
Hall, Roy Olney	Morgantown	Sen., A. B.
Hall, Sobisca Stalnaker	Horner	1st Yr., Med.
Hallam, John Boyles	McKeesport, Pa.	Jun., B. S. C. E.
Halperin, Isaac Elhanan	Cleveland, Ohio	2nd Yr., Med.
Hamill, Maurice Ralph	Mill Creek	Soph., B. S. C. E.
Hamilton, Delbert Dewey	Richwood	Soph., B. S. M. E.
Hamilton, Eleanor	Wheeling	Fr., A. B.
Hamilton, Fannie Loraine	Mannington	Soph, A. B.
Hamilton, Frank	Morgantown	Fr., A. B.
Hamilton, Zana Creswell	Congo	Fr., A. B.
Hammat, Mary Elizabeth	Parkersburg	Soph., A. B.
Hammond, Kent Cato	West Union	1st Yr., Med.
Hamrick, Farmer Hanson	Webster Springs	*Fr., A. B.
Hamrick, Martin Elliott	Webster Springs	Jun., B. S. Agr.
Hamrick, Portia Jane	Webster Springs	*Fr., A. B.
Hamrick, Russell Shelton	Clay	Soph., A. B.
Hanford, Josephine	Morgantown	Grad., A. & S.
A. B. West Virginia University, 1921		

Hanley, Gwendolyn Joan	Mannington	Jun., A. B.
Hansford, Roscoe R.	Mt. Clare	Fr., A. B.
Hardee, Erastus Bacon	Stem	1st Yr., Med.
Hardie, William Douglas	Grafton	*Fr., A. B.
Harding, Grayce Alta	Clarksburg	Fr., A. B.
Hardman, Oren	Troy	Sen., A. B.
Hardman, Victor Hugo	Jane Lew	Jun., B. S. Agr.
Hardy, Paul Elbert	Keyser	*Fr., A. B.
Hare, Alfred Crocus	Murfreesboro, N. C.	Voc., Agr.
Hare, John Lynn	Morgantown	Soph., B. S. Agr.
Hark, Joseph Lewis	Charleston	Sen., B. S. E. E.
Harker, Herbert Fletcher	Morgantown	Sen., B. S. E. M.
Harmer, Hardin Roads	Shinnston	Sen., A. B.
Harper, Camille Deval	Spencer	Fr., A. B.
Harper, Charles Price	Upper Tract	Soph., A. B.
Harpfer, Harold Charles	Wheeling	Soph., A. B.
Harpold, Allan Earl	Ravenswood	Jun., B. S. C. E.
Harrick, Joseph Victor	Punxsutawney, Pa.	Soph., B. S. Agr.
Harrick, Stephen	Punxsutawney, Pa.	*Fr., A. B.
Harris, Benjamin Franklin	Morgantown	Fr., B. S. C. E.
Harris, Georgine	Morgantown	Grad., A. & S.
A. M., University of Wisconsin, 1917		
Harris, Orla Virginia	Spencer	Fr., A. B.
Harrison, Lucien Edgar	Huntington	Soph., B. S. E. M.
Harrison, Matthew Waite	Weston	Jun., B. S. Agr.
Harsh, Fairy Virginia	Dallas	Fr., A. B.
Hart, Walter Lawrence	Morgantown	Soph., A. B.
Hartley, Luther Sherman	Cottageville	Fr., A. B.
Hartman, Bruce	Fairmont	2nd Yr., Phar.
Hartman, Edwin Thomas	Morgantown	Fr., B. S. E. E.
Harvey, John Walker	Oak Hill	Fr., B. S. M. E.
Harvey, Theodore Herbert	Uno	Voc., Agr.
Haskins, Emma Louise	Wheeling	Fr., A. B.
Hatfield, Coleman Alderson	Omar	1st Yr., Law
Hawkins, Robert Cunningham	Fairmont	Soph., B. S. Agr.
Hawley, Roy McKinley	Bluefield	Fr., B. S. C. E.
Hayes, Benjamin Raymond	Morgantown	Soph., A. B.
Hayes, Mary Tirzah	Morgantown	Sen., A. B.
Hayes, Myrtle Vance	Morgantown	Soph., A. B.
Hayes, William Stuart	Morgantown	Soph., A. B.
Haymond, John Andrew Clark	Fairmont	*Fr., B. S. E. M.
Headlee, Clarence Ottas	Mt. Morris, Pa.	*Fr., B. S. Agr.
Heaster, Emmett Lawrence	Morgantown	*Fr., B. S. Agr.
Heater, Francis Harley	Burnsville	Voc., Agr.
Heathcote, William Richard	Morgantown	Soph., B. S. E. M.
Heavener, Chester Paul	Peterstown	3rd Yr., Law
A. B., Washington & Lee University, 1912		
Hechmer, Arthur Benedict	Grafton	1st Yr., Med.
Hediger, Frank Joseph	Wheeling	Voc., Agr.
Hedrick, Asa Addison	Sinks Grove	Fr., B. S. Agr.
Hedrick, Forest William	Fort Spring	Jun., B. S. Agr.
Hedrick, Glenna Elizabeth	Alderson	*Fr., A. B.
Hedrick, Oley Foster	Brushy Run	Grad., Eng'g.
B. S. C. E., West Virginia University, 1920		
Hedrick, Thomas Day	Lewisburg	*Fr., B. S. C. E.
Heflin, John Frank	West Union	Soph., A. B.

Hefner, Arnold Moore	Grafton	*B. S. Agr.
Heilmann, James Bert	Morgantown	Fr., A. B.
Heilman, Lewis	Weirton	Soph., A. B.
Hein, William Clinton	Oil City, Pa.	Fr., B. S. M. E.
Heironimus, Terring Whitfield	Grafton	Fr., A. B.
Heizer, William Thomas	Charleston	Soph., B. S. C. E.
Helmbright, Louis Patrick	Wheeling	Sen, B. S. Ch. E.
Henderson, Evangeline	Moundsville	Soph., A. B.
Henderson, Mahlon Lucas	Fairmont	Fr., B. S. E. E.
Hendricks, Allen Lemen	Shepherdstown	*Fr., B. S. E. E.
Hendrickson, Lucille	Cumberland, Md.	Soph, B. S. H. E.
Hennen, Jacob Leroy	Moundsville	Fr., B. S. Agr.
Henry, Burhyl Tillman	Morgantown	Soph., B. S. M. E.
Henry, Ella Elizabeth	Morgantown	Fr., A. B.
Henson, Eleanor Elizabeth	Bunker Hill	Sen., A. B.
Hereford, John Withers	Hogsett	2nd Yr., Law
Hermann, Harry Frederick	Triadelphia	Fr., B. S. C. E.
Herold, Elizabeth Belle	Marlinton	Soph., A. B.
Herold, Eugenia Pearle	Hookersville	*Fr., A. B.
Herold, George Dana	Summersville	Soph., A. B.
Herold, Reta Lillian	Martlinton	*Fr., A. B.
Herron, Thomas Brown	Aspinall, Pa.	Fr., A. B.
Hersman, Marion Ruckman	Grantsville	1st Yr., Law
Hertzog, Virgil Ross	Shinnston	2nd Yr., Phar.
Hertzog, William Clyde	Shinnston	Grad., A. & S.
Heslep, George Herbert	Sistersville	Fr., A. B.
Hess, Bernard Leo	Clarksburg	1st Yr., Law
Hess, Dowe Scott	Cowen	Fr., B. S. M. E.
Hess, Harold Clare	Mannington	1st Yr., Law
A. B., West Virginia University, 1920		
Hess, Lester Clay	Mannington	Fr., A. B.
Hess, Paul Rex	Fairmont	Soph., B. S. E. E.
Hess, William Taylor	Morgantown	Fr., A. B.
Hibbs, George Edgar	Republic, Pa.	Fr., B. S. M. E.
Hickman, Laura Josephine	Morgantown	Jun., A. B.
Hicks, Dana Minter	Webster Springs	Fr., A. B.
Higinbotham, George Randall	Shinnston	*Fr., B. S. C. E.
Hileman, Frances Virginia	Rockbridge Baths, Va.	Jun., A. B.
Hill, Angelina Louise	Wick	*Fr., B. S. H. E.
Hill, Charles Montgomery	Charleston	Sen., B. S. E. E.
Hill, Franklin Herman	Middlebourne	Fr., B. S. M. E.
Hill, George Wilbur	Fairmont	Jun., B. S. C. E.
Hill, Harry	Clayton	Sen., A. B.
Hill, John Gibson	Charleroi, Pa.	Jun, A. B.
Hill, Louis Hawes	Charleston	Jun., B. S. C. E.
Hill, McKinley Tennyson	Middlebourne	Jun., B. S. Agr.
Hill, Philip Henry	Charleston	Fr., A. B.
Hill, Pierre Frederick	Fairmont	Soph., B. S. E. E.
Hilliard, John Orval	Morgantown	*Fr., A. B.
Hinerman, Chauncey Depew	Cameron	Soph., A. B.
Hinkle, Walton Hunter	Fairmont	Fr., B. S. M. E.
Hiser, Charles Oscar	Romney	Soph., A. B.
Hoard, Lyle	Morgantown	*Fr., B. S. E. E.
Hoard, Wilda Beatrice	Morgantown	Soph, B. S. H. E.
Hodgkinson, Cecil Herbert	Meadville	1st Yr., Med.
B. S., Allegheny College, 1917		

Hodgson, Catherine	Morgantown	Fr., A. B.
Hodgson, Margaret Ellis	Morgantown	Jun., A. B.
Hoff, William Bruce	Parkersburg	1st Yr., Law
Hoffman, Wilbur Emory	Keyser	Fr., A. B.
Hoffmaster, Mary Jeannette	Millville	Fr., A. B.
Hogan, Edward D.	Parkersburg	Fr., A. B.
Hoge, Elizabeth Stewart A. B. West Virginia University, 1920	Morgantown	Grad., A. & S.
Hogg, William Bennett	Pt. Pleasant	3rd Yr., Law
Hogue, Frank William	Fairview	Sen., A. B.
Hogue, William Walton	Charleston	*Fr., B. S. M. E.
Hoke, Dwight Moody	Second Creek	Voc., A. & S.
Hoke, Rex Langton	Second Creek	Jun., A. B.
Holbert, Carl Clinton	Shinnston	*Fr., B. S. M. E.
Holden, James Lemuel	Clarksburg	Fr., B. S. Agr.
Holmes, Maurice Coffyn	Raleigh	Fr., B. S. E. E.
Holroyd, William McKinley	Athens	2nd Yr., Law
Holswade, Geo. Washington, Jr.	Spencer	*Fr., A. B.
Holt, Rush Dewey	Weston	Soph., A. B.
Hood, Ralph Glen	Williamstown	Fr., A. B.
Hopke, William Brew	Grafton	Jun., B. S. C. E.
Hopkins, Martin Francis	Cameron	Sen., B. S. C. E.
Hopwood, Arthur Thomas	Mannington	Sen., A. B.
Horn, Arthur Oscar	Jeannette, Pa.	Fr., A. B.
Horner, Warren Bartlett	Morgantown	Sen., A. B.
Hott, George David	Morgantown	Soph., A. B.
Hough, Scott	Wellsburg	Jun., A. B.
Houseman, Violet Roxie	Morgantown	Jun., A. B.
Houston, Patty	Cameron	Soph., A. B.
Howard, Carson Edison	Cameron	*Fr., B. S. C. E.
Howard, Charles Leroy	Triadelphia	Fr., A. B.
Howell, James Gerald	Altoona, Pa.	1st Yr., Med.
Hudock, George Bernard	Olives, Pa.	Jun., A. B.
Huff, Shady Snow	Burnt House	Sen., B. S. H. E.
Huffman, Wilbur Carl	Fairmont	*Fr., B. S. E. M.
Hughart, James Frank	Lewisburg	Soph., B. S. C. E.
Hughart, John Dayton	Sissonsville	Voc., Agr.
Hughes, Eva Florence	Parkersburg	Sen., A. B.
Humphreys, Mabel Pemberton	Charleston	Fr., A. B.
Hungerford, Frank Lee	Hilltop	*Fr., A. B.
Hunker, Carrie Belle	Clarksburg	Fr., A. B.
Hunter, Helen Elizabeth	Morgantown	Fr., A. B.
Hurst, Kenneth Earl	Wilsonburg	Fr., A. B.
Hussey, Anna May	Youngstown, Ohio	Jun., A. B.
Hustead, Ivy Ina	Fairmont	Sen., A. B.
Hutchins, Charles Ogden	Wheeling	Soph., A. B.
Hutchinson, Charles Edgar	Morgantown	Soph., B. S. E. E.
Hutchinson, Edwin Berry	Ravenswood	Jun., B. S. E. M.
Hutchinson, Mildred Matilda	Welch	Sen, A. B.
Hutchison, Gordon	New Martinsville	1st Yr., Phar.
Hutchison, Lafayette Holland	St. Albans	Fr., A. B.
Hutson, Clement Blair	Smithton	Jun., B. S. E. E.
Hutson, Ray	Salem	Sen., B. S. Agr.
Hyman, Morton	Keystone	2nd Yr., Law
Ice, Herschel Conaway	Fairmont	Jun., A. B.
Ihlenfeld, Ulfred Edward Carl	Wheeling	Fr., B. S. E. E.

Imholz, Harry William	Norfolk, Va.	Voc., Eng'g.
Ireland, Frances Lavone	Morgantown	Soph., A. B.
Ireland, Virgie Viola	Morgantown	*Fr., A. B.
Irvine, Dee Louise	Bridgeport	Special A. & S.
Irwin, George William	Homestead, Pa.	*Fr., A. B.
Jackson, Carl Curtis	Pinchton	Fr., A. B.
Jackson, Wilfred	Elkins	*Fr., B. S. Agr.
Jaco, Jesse Miller	Morgantown	Grad., A. & S.
A. B., West Virginia University, 1920		
Jamison, Georgia Garnet	Morgantown	Soph., A. B.
Jarrell, Milton	Oak Hill	Sen., B. S. C. E.
Jeffreys, Edna Frances	Logan	Jun., B. S. H. E.
Jeffreys, Ruth Melvina	Logan	Jun., B. S. H. E.
Jeffries, Anna Chidester	Morgantown	Special A. & S.
Jeffries, John William	Morgantown	*Fr., A. B.
Jenkins, Kathryn Virginia	Morgantown	1st Yr., Law
Jenni, Clyde Bernard	Wheeling	Fr., B. S. C. E.
John, Brinley	Morgantown	2nd Yr., Med.
Johnson, Bernard William	Thomas	Fr., B. S. E. E.
Johnson, Carl Edward	Thomas	Jr., A. B.
Johnson, Clyde Bosworth	Charleston	Fr., B. S. E. E.
Johnson, Helen Gould	Wheeling	Fr., A. B.
Johnson, Mary Martin	Morgantown	Grad., A. & S.
A. B., Meredith College, 1921		
Johnson, Philip	Ronceverte	Soph., A. B.
Johnson, Rebecca	Keyser	Soph., B. S. H. E.
Johnson, Russell Ruddell	Fairmont	Soph., A. B.
Johnston, Elizabeth	Elk Lick, Pa.	Jun., A. B.
Johnston, Ernest Milton	Indiana, Pa.	*Fr., A. B.
Johnston, Jessie Lee	Morgantown	Sen., B. S. H. E.
Johnston, John Scott	Wheeling	Fr., B. S. C. E.
Johnston, Olive Mae	Morgantown	Fr., A. B.
Johnston, Ross Bradshaw	Morgantown	Soph., A. B.
Johnston, Ruth Helene	Morgantown	Jun., A. B.
Joliffe, Martha Ellen	Grafton	Fr., B. S. H. E.
Joliffe, Mayo Wilson	Catawba	Fr., A. B.
Joliffe, Norman Hayhurst	Morgantown	Jun., A. B.
Jones, Archbald Marion	Smithton	1st Yr., Med.
Jones, David Harvey	Wellsburg	Fr., B. S. Ch. E.
Jones, Edwin Channing	Smithton	Fr., B. S. E. E.
Jones, Geneva Elinor	Morgantown	*Fr., A. B.
Jones, George Tilghman	Morgantown	Voc., Agr.
Jones, Harold Pierpont	Fairmont	Soph., B. S. E. E.
Jones, Hugh Eckess	Fairmont	Jun., B. S. Ch. E.
Jones, John Hornor	Bridgeport	Fr., B. S. Agr.
Jenes, John Paul	Fairmont	Soph., B.S.Ch.E.
Jones, Rae Roberts	Morgantown	Sen., A. B.
Jones, Raymond Gordon	Fairmont	Soph., B. S. M. E.
Jones, Sylvia Gareline	Harrisville	Fr., A. B.
Jones, William J., Jr.	Morgantown	Grad., Agr.
Judy, Marian Hendrickson	Petersburg	2nd Yr., Phar.
Juergens, Jacob Hugh	Sutton	*1st Yr., Phar.
Juhling, Florence Emmalyn	Hartford	Jun., A. B.
Justice, Rupert Harlan	Huntington	*Fr., A. B.
Kaltenbach, Clifton Joseph	Wheeling	Jun., B. S. C. E.
Kaltenbach, Harold Joseph	Wheeling	3rd Yr., Law

Kane, Geraldine	Weston	Sen., A. B.
Kaplan, Bertha	Morgantown	Sen., A. B.
Karickhoff, Percy Camden	Buckhannon	Soph., B. S. Agr.
Kay, Robert H. C.	Leon	2nd Yr., Law
Kaylor, John, Jr.	Graham Sta.	Soph., A. B.
Kayser, Fayne Albert	Clarksburg	Fr., A. B.
Keefer, William Francis	Wheeling	3rd Yr., Law
Keener, George Ira, Jr.	Weston	Jun., A. B.
Kehren, Russell Allen	Forest City, Pa.	Fr., A. B.
Kellerman, Martin Warren	Mt. Gay	Soph., B. S. E. E.
Kelley, Albert Lee	Fairmont	Soph., B. S. C. E.
Kelley, Grace Gertrude	West Liberty	Sen., A. B.
Kelly, Francis Benedict	Tunnelton	Fr, A. B.
Kelly, Robert Gorrell	Sutton	2nd Yr., Law
Kendall, Harry Chauncey	Morgantown	Soph., A. B.
Kendall, Robert Arthur	Morgantown	Fr., A. B.
Kennedy, David William	Morgantown	Voc., Agr.
Kennedy, Harry Greene	Charleston	Fr., B. S. E. M.
Kennedy, John Cruikshanks	Charleston	Jun., A. B.
Kennedy, Katie Marguerite	Sabraton	Jun., B. S. H. E.
Kenney, Cal	Clifty	Jun., B. S. Agr.
Kent. Arthur Glenn	Cameron	Soph., A. B.
Kern, Gaylord Johnson	Morgantown	Soph., A. B.
Kerr, George Earle	Pennsboro	Fr., A. B.
Kessel, Oliver Dennis	Ripley	Soph., A. B.
Kessel, Russel	Ripley	1st Yr., Med.
Kessler, Joseph Claudius	Richwood	*Fr., A. B.
Kessler, Opal Alice	Richwood	*Fr., A. B.
Kidd, Grady Abshire	Hillsboro	Soph., B. S. Agr.
Kiger, Clem Bryan	New Martinsville	Soph., B. S. Agr.
Killen, Margaret Kathleen	Terra Alta	Fr., A. B.
Kimmel, Isabel Harriett	Grafton	Sen., B. S. H. E.
Kimmins, Helen Louise	Elm Grove	Sen., B. S. H. E.
Kincaid, Lester Henderson	Ramsey	Soph., B.S.Ch.E.
Kincaid, Roy Houston	Alderson	Voc., Agr.
King, Charles Emerson	Wheeling	Voc., Eng'g.
King, William Matson	Ripley	*Fr., A. B.
Kinney, Charles Encil	Fairmont	Fr., B. S. C. E.
Kisner, Albert George	Fairmont	Fr., B. S. E. E.
Kisner, Ora Leona	Fairmont	Soph., A. B.
Kizinski, Marian	Star City	1st Yr, Med.
Klein, Leo Leonard	New York, N. Y.	2nd Yr., Med.
Klinger, Earl	Morgantown	Soph., B. S. E. E
Klosterm-eyer, Howard Randolph	Charleston	Fr., A. B.
Knapp, William Kile	Sistersville	*Fr., A. B.
Knight, Florence Cathryne	Williamsburg	Fr., A. B.
Knight, James Lloyd	Clarksburg	Jun., A. B.
Knight, John Forrest	Fairmont	Fr., A. B.
Knopf, Helen Keith	Alderson	*Fr., A. B.
Knopp, Virgil Sylvester	Parkersburg	Soph., B. S. M. E.
Knutti, Ralph Eddy	Morgantown	Jun., A. B.
Kochin, Louis Mordecai	Pittsburgh	1st Yr., Med.
Kohler, Louis Kirsh	New Castle, Pa.	2nd Yr., Med.
Korte, Joseph Clarence	Grafton	Special Eng'g.
Kramer, Hunter Nickell	Ronceverte	Soph., A. B.
Kramer, Samuel Emanuel	Perth Amboy, N. J.	2nd Yr., Med.

Kraner, William Harry Thomas	Morgantown	Sen., B. S. Ch. E.
Krebs, Louis Theodore, Jr.	Morgantown	Fr., B. S. E. M.
Krosnoff, John Alexander	Marianna, Pa.	Soph., A. B.
Kulpa, Stanley Emil	Wheeling	Fr., B. S. Ch. E.
Kunkel, Ione Elizabeth	Wheeling	Jun., A. B.
Kurtz, Kenneth Swan	Weston	Soph., A. B.
La Barre, Nestor Marshall	Salem	Fr., A. B.
Laing, James Tamplin	Charleston	Soph., A. B.
Lake, Troy Amour	Parsons	Soph., B. S. E. E.
Lakin, James Offutt	Charleston	Sen., A. B.
Lambert, John Samuel	Pineville	*Fr., B. S. E. E.
Lambert, Lake	Welch	Jun, A. B.
Lambert, Luther Rush	Welch	2nd Yr., Med.
Lambert, Wintford	Herndon	Voc., Agr.
Lambson, John Bonner	Morgantown	*Fr., A. B.
Langfitt, Lyle Edgar	West Union	Fr., B. S. C. E.
Lanham, Nell Almyra	Clarksburg	Jun., A. B.
La Poe, Albert Edward	Point Marion, Pa.	Jun., B. S. E. E.
La Rue, George William	Kingwood	*Fr., A. B.
Lashley, Rebecca Louise	Cumberland, Md.	Soph., A. B.
Law, James Edward, Jr.	Clarksburg	Fr., A. B.
Lawrence, Bert Gray	Maybeury	Soph., A. B.
Lawrence, Paul Andrew	Chula, Va.	Voc., Agr.
Lawson, Lee Winston	Williamson	Soph., A. B.
Lawson, Lena	Williamson	Soph., A. B.
Lawson, Leon Kline	Auburn	Jun., A. B.
Lazenby, Jane Florence	Princeton	Soph., A. B.
Lazzell, Rufus Glenn	Morgantown	Sen., B. S. E. M.
Leavitt, Elizabeth Anne	Parkersburg	*Fr., A. B.
Lee, Reuben	Riley	Soph., B. S. E. E.
Lefevre, George Arthur	Morgantown	Fr, B. S. E. E.
Lehman, William Parry	Fairmont	Soph., B. S. C. E.
Leibforth, William Bryan	Wellsburg	1st Yr., Phar.
Lemley, Clark F.	Star City	2nd Yr., Med.
Lemley, Wilda May	Morgantown	Soph., A. B.
Leonard, Howard	Grafton	*1st Yr., Phar.
Leonhart, James Chancellor	Dundalk, Md.	Fr., B. S. M. E.
Le Pera, Alice Virginia	Morgantown	Fr., A. B.
Lepera, Frank	Morgantown	Fr., B. S. C. E.
La Pera, Mary	Morgantown	Fr., A. B.
Le Sage, William Dovel	Huntington	1st Yr., Law
Levin, Hyman Peter	Cleveland, Ohio	1st Yr., Med.
Lewellyn, Raymond Hibbs	Wheeling	1st Yr., Med.
Lewis, Anna Virginia	Fairmont	Fr., A. B.
Lewis, Cecile	Kingwood	*Fr., A. B.
Liddle, Jonathan Ernest	Nemours	*Fr., B. S. E. E.
Lilly, Ardath Clemont	Logan	*Fr., A. B.
Lilly, Frank Otho	Hinton	2nd Yr., Phar.
Lilly, Goff Platt	Charleston	Fr., A. B.
Lilly, Jenny June	Bluefield	Soph., A. B.
Lilly, John Preston	Athens	Fr., A. B.
Lilly, Robert Glenn	Charleston	Fr., A. B.
Limerick, Charles Thomas	Fairmont	Sen., B. S. M. E.
Lindamood, Freda	Parkersburg	Jun., A. B.
Linger, Maynard	Clarksburg	Jun., A. B.
Liston, Jesse Earle	Morgantown	Sen., B. S. Agr.

Livesay, Edward Russell	Lewisburg	Soph., B. S. C. E.
Livezey, Halard Michael	St Albans	*Fr., B. S. C. E.
Lloyd, Edith Madelon	Charleston	Fr., A. B.
Lohman, Alfred William	Wheeling	Jun., B. S. Agr.
Long, Cloyd Darl	Parsons	Fr., A. B.
Long, Evelyn Louise	Bluefield	*Fr., A. B.
Lorentz, Mary Belle	Wheeling	Soph., A. B.
Loudin, Francis Marion	Pullman	*Fr., A. B.
Loudin, Margaret Elizabeth	Morgantown	Fr., A. B.
Lough, Arthur Harvey	Morgantown	Sen., B. S. Agr.
Love, Charles Marion, Jr.	Huntington	Soph., A. B.
Lowe, Clarence Ray	Morgantown	Jun., B. S. E. E.
Lowenfish, Felix Philip	Bronx	2nd Yr., Med.
Lowry, Hubert David	Huntington	Jun., A. B.
Lowry, Thomas Frederick	Paden City	Grad. A. & S.
A. B., West Virginia University, 1920		
Lowther, Genevieve	Clarksburg	Soph., A. B.
Loy, Bernard Cecil	Romney	Soph., A. B.
Lucas, William Edward	Shinnston	*Fr., B. S. M. E.
Luckey, Paul David	Dawson, Pa.	Soph., A. B.
Lukens, Robert William	Wheeling	Jun., A. B.
Lundy, Melvin	Galax, Va.	Voc., Agr.
Lustgarten, Earl Matthew	Wheeling	Fr., A. B.
Lyall, Leslie Marshall	Morgantown	Jun., A. B.
Lyall, Lucien Hite	Morgantown	*Fr., A. B.
Lynn, Mary Elizabeth	Republic, Pa.	Jun., A. B.
Lyon, Helen Lucile	Bridgeport	Fr., A. B.
Lytle, Irvin Ross	Morgantown	Jun., B. S. Agr.
Lytle, Ruth Huff	Morgantown	Sen., A. B.
MacDonald, Donald	Glenwood	Soph., A. B.
MacQueen, Allice Ann	Charleston	*Fr., A. B.
Madeira, Martha	Morgantown	Fr., A. B.
Madeira, William Bernard	Morgantown	Sen., A. B.
Madera, William Luther	Morgantown	Soph., A. B.
Madegan, Lillian O'Dell	Morgantown	*Fr., A. B.
Magner, Maurice Joseph	Sistersville	*Fr., A. B.
Magruder, Thomas Garland	Morgantown	*Fr., A. B.
Mahan, Walter Everett	Follansbee	1st Yr., Law
Mahaney, Clarence Russell	Morgantown	Jun., B. S. Ch. E.
Malcolm, Rachel Winslowe	Farmington	Jun., A. B.
Mallonee, Mildred Louise	Wilkinsburg, Pa.	*Fr., B. S. H. E.
Malloy, John Francis	Charleston	Jun., B. S. M. E.
Manley, Hugh Elton	Monongah	Jun., A. B.
Mann, Eunice Bernetta	Renick	Fr., A. B.
Mann, Fletcher Wills	Ballard	Fr., A. B.
Marcum, Leonard Dheuel	Gary	2nd Yr., Phar.
Marks, Olen Esker	Flemington	Fr., B. S. Agr.
Marr, Norval Mason	Barnsley, Pa.	2nd Yr., Med.
Marsh, John William	Warwood	Soph., A. B.
Marshall, Adam Jacob	Elkins	Soph., B.S.Ch.E.
Marshall, Edmund	New Cumberland	1st Yr., Law.
Marshall, Russell Chauncey	Skyles	6Fr., B. S. E. E.
Martin, Arthur Wayne	Morgantown	*Fr., B. S. M. E.
Martin, Carman Ira	Maysville	Soph., A. B.
Martin, Carolyn Virginia	Charleston	Jun., A. B.
Martin, Eva Martitia	Bluefield	Jun., A. B.

Martin, Frank Marion	Moundsville	Soph., B. S. E. E.
Martin, Georgia Mildred	Romney	Soph., A. B.
Martin, Gertrude	Morgantown	Grad., A. & S.
Martin, Grace	Morgantown	Fr., A. B.
A. B., West Virginia University, 1920		
Martin, Helen Mar	Enterprise	Jun., A. B.
Martin, Homer Chester	Charleston	Jun., A. B.
Martin, Hugh Burns	Farmington	*Fr., B. S. C. E.
Martin, James Lee, Jr.	Morgantown	2nd Yr., Med.
Martin, Lillian Gertrude	Shinnston	Jun., A. B.
Martin, Mattie Elizabeth	Monongah	Jun., A. B.
Martin, Myra Louise	Monongah	Jun., A. B.
Martin, Seba James	Shinnston	Soph., B. S. Agr.
Martin, Thelma Carmen	Morgantown	*Fr., A. B.
Martin, Vecil Osurth	Morgantown	*Fr., A. B.
Mason, Kermit Raymond	Morgantown	*Fr., A. B.
Mason, Paul Lyman	Moundsville	Soph., A. B.
Mason, Vivian	Terra Alta	Fr., A. B.
Mason, Wayne Eldon	Moundsville	1st Yr., Law
Mason, William Arthur Harrison	Philippi	2nd Yr., Law
Matheny, Willie Ray	Parkersburg	Fr., A. B.
Mathers, Margaret May	Morgantown	Soph., A. B.
Matthews, Helen Gertrude	Martinsburg	Fr., A. B.
Mauzy, James Laird	Harman	Voc., Agr.
Mauzy, Michael Harper	Franklin	2nd Yr., Law
A. B., West Virginia University, 1920		
Maxwell, Clarissa Jane	Manayka	Fr., A. B.
Mayers, George Hamilton	Fairmont	Fr., A. B.
Mayfield, James Edward	Buckhannon	2nd Yr., Phar.
Mayfield, Maude Emerson	Morgantown	Jun., B. S. H. E.
McAfee, Dean Monroe	Morgantown	Voc., Agr.
McBee, Alfred Roy	Flemington	Soph., A. B.
McBee, Ruth Mildred	Morgantown	Fr., B. S. H. E.
McCauley, William Deles	Moorefield	1st Yr., Law
McChesney, Alice Johnson	Charleston	3rd Yr., Law
McClue, Arthur Eugene	Clarksburg	1st Yr., Med.
McClung, Alexander Keith	Rupert	Soph., B. S. E. M.
McClung, John Fred	Sinks Grove	Fr., B. S. E. E.
McClung, Mary Eleanor	Sinks Grove	*Fr., B. S. H. E.
McClure, Andrew Robert	Wheeling	Sen., A. B.
McClure, Irene Virginia	Morgantown	*Fr., A. B.
McColloch, Mary Belle	Wheeling	Fr., A. B.
McCormick, Wilbur Carl	Congo	*Fr., A. B.
McCoy, Paul Edgar	Letart	Voc., Agr.
McCue, Ruth	Summersville	Sen., A. B.
McCullough, Bernerd	Mole Hill	Soph., B. S. E. E.
McCurdy, John Alexander	Elm Grove	Soph., A. B.
McCutcheon, Randolph	Hominy Falls	2nd Yr., Med.
McDaniel, Floyd	Keyser	Jun., B. S. Agr.
McDaniel, Madge Beatrice	Meadowbrook	Fr., A. B.
McDaniel, Marjorie Kathelen	Keyser	Fr., A. B.
McDonald, DeWitt Clay	Morgantown	Fr., A. B.
McDonald, James Ernest	Inwood	Sen., B. S. Agr.
McDonald, Lois	French Creek	Fr., B. S. H. E.
McDonald, Rexford Glenn	Peterstown	Jun., B. S. Agr.
McDonald, Richard Clyde	Inwood	Jun., B. S. Agr.

McElrath, Margaret	Bramwell	Jun., A. B.
McElrath, Mary Jessie	Bramwell	Fr., B. S. H. E.
McFarland, Daniel Willard	Ravenswood	Sen., B. S. Agr.
McGary, George Bryan	Moundsville	Jun., A. B.
McGee, Lazier Smith	Meadowbrook	Fr., B. S. E. M.
McGee, Sidney Lamont	Morgantown	Sen., A. B.
McGinnis, Marguerite Evelyn	Mona	*Fr., B. S. H. E.
McGovern, Edward Rawson	Charleston	Fr., B. S. Agr.
McGranahan, Alice Virginia	Wheeling	Soph., A. B.
McGuffie, Otley Gayle	Littleton	Soph., B. S. E. E.
McGuire, Patrick Joseph	Webster Springs	Special Law
McInnis, Neil Ross	Dola	Jun., B. S. E. M
McIntire, George Burton	Morgantown	Sen., B. S. Agr.
McIntosh Frederick F.	Spencer	Sen., A. B.
McKee, Edward Frank	Triadelphia	Fr., A. B.
McKee, John McDonald	Triadelphia	2nd Yr., Law
McKee, Louis Alan	Triadelphia	3rd Yr., Law
McKee, Madeliene	Rice's Landing, Pa.	*Fr., A. B.
McKenzie, Ellen Thompson	Cresaptown, Md.	Jun., A. B.
McKenzie, Eugene Eaton	Elgood	Soph., A. B.
McKenzie, Thomas Fulton	New Cumberland	2nd Yr., Law
McKinley, Lloyd Henry	Lost Creek	3rd Yr., Law
McKisson, Elsie Alice	Sistersville	Soph., A. B.
McMillen, Edna Glenola	Masontown	Fr., A. B.
McMillen, Pauline	Moundsville	Soph., B. S. H. E.
McMurrer, Herbert Joseph	Charleston	Soph., A. B.
McNeil, Kathleen	New Cumberland	Jun., A. B.
McNeill, Mary Eilleen	Morgantown	Soph., A. B.
McNinch, Tencie Pauline	Moundsville	Soph., A. B.
McVey, Hobart Bascom	Huntington	*Fr., B. S. C. E.
McVey. Howard Rodgers	Lewisburg	Jun., B. S. Agr.
Meadows, Curtis George	Oak Hill	1st Yr., Phar.
Meek, Grace L.	Elm Grove	Jun., A. B.
Meek, John Robertson	Clator	Jun., A. B.
Meek, Thomas Harris	Clator	Sen., B. S. C. E.
Meeks, Edward Arthur	Clarksburg	Fr., A. B.
Megrail, Lesta Howard	Morgantown	Soph., B. S. H. E.
Mendelsohn, Rudolph Herman	Frostburg, Md.	Jun, B. S. E. E.
Menefee, Isaac Newton	Morgantown	Fr., B. S. E. E.
Mercer, John Robert	Moundsville	Fr., B. S. E. E.
Mercer, Zelma	Moundsville	Soph., A. B.
Meredith, Jamison	Fairmont	*Fr., A. B.
Meredith, Jesse Harper	Fairmont	Soph., A. B.
Meredith, Kate	Morgantown	Grad., A. & S.
A. B., West Virginia University, 1916		
Meredith, Mabel Virginia	Morgantown	*Fr., B. S. H. E.
Meredith, Mildred Ann	Fairmont	Soph., A. B.
Meredith, Russell Delmar	Fairmont	Soph., B. S. Agr.
Metz, Roy de Vaughn	Wallace	2nd Yr., Med.
Michael, Benjamin Wayne	Morgantown	Voc., Agr.
Michael, Kenneth Estabrooke	Martinsburg	Fr., A. B.
Michie, Arthur Thornton	Fairmont	*Fr., B. S. E. E.
Milburn, Azby Alexander	Hinton	Soph., A. B.
Miles. French Lovett	Buckhannon	Sen., B. S. Agr.
Miles, Mabel	Buckhannon	Soph., A. B.

Miller, Alvia Martin	Morgantown	Grad., Eng'g.
B. S. M. E., West Virginia University, 1921		
Miller, Edgar O'Dell	Blacksville	*Fr., B. S. E. E.
Miller, Eleanor Shafer	Terra Alta	Soph., B. S. H. E.
Miller, Gulie Alice	Huntington	Jun., B. S. H. E.
Miller, John Wesley	Webster Springs	*1st Yr., Phar.
Miller, Leroy Brooks	Morgantown	Jun., A. B.
Miller, Mary Ethel	Rockwood, Pa.	Fr., A. B.
Miller, Ruth	Morgantown	Jun., A. B.
Miller, Virginia Baker	Morgantown	Jun., A. B.
Miller, Willa Gladys	Blacksville	Jun., B. S. H. E.
Miller, William Henry	Oak Hill	Sen., A. B.
A. B., Ashland College, 1916		
Milligan, Mary Maywood	St. Albans	Soph., A. B.
Milliken, Frederick Coursin, Jr.	Landsdowne, Pa.	*Fr., A. B.
Mitchell, D. Orval	Clarksburg	Fr., A. B.
Mitchell, Fred Oscar	Welch	Soph., B. S. E. E.
Mlekush, Robert Joseph	Thomas	*1st Yr., Phar.
Moats, Gertrude Lucile	Harrisville	Fr., A. B.
Moats, Oleta Kelcel	Clarksburg	Soph., A. B.
Mockett, Walter William	Swissvale, Pa.	2nd Yr., Med.
Moffitt, Guy Arthur	Weston	Jun., B. S. E. E.
Montgomery, Mary Susan	Kingwood	Fr., A. B.
Montgomery, William Newton	Kingwood	Fr., A. B.
Moore, Dana Trescott	Morgantown	1st Yr., Med.
B. S. Agr., West Virginia University, 1920		
Moore, Ernestine May	Harrisville	Soph., A. B.
Moore, Harry Webster	Moundsville	Jun., A. B.
Moore, James William	Fairmont	Soph., B. S. M. E.
Moore, John Norbert	Morgantown	*Fr., A. B.
Moore, Mabel Davis	Morgantown	Sen., A. B.
Moore, Mary Elizabeth	West Alexander, Pa.	Jun., A. B.
Moore, Robert Taylor	Ranson	Soph., B. S. Agr.
Moore, Virginia Christian	Flatwoods	Fr., A. B.
Moore, Walter Scott	Milton	Jun., B. S. E. M.
Moore, William Herbert	Charleston	Fr., B. S. Ch. E.
Morgan, Claude Moore	Morgantown	1st Yr, Law
Morgan, Emily Josephine	Morgantown	Jun., B. S. H. E.
Morgan, Frank Holmes	Morgantown	*Fr., A. B.
Morgan, William Dudley	Brady	*Fr., A. B.
Morley, Burton Raymond	Charleston	Sen., A. B.
Morris, Alice Dulaney	Harrisville	Sen., A. B.
Morris, Emily Susan	Cumberland, Md.	Soph., A. B.
Morris, Naomi	Fairmont	Soph., A. B.
Morris, Roy Kelly	Charleston	Special Law
Morris, Warren Francis	New Martinsville	1st Yr., Law
Morrison, Celesta Glee	Clarksburg	Soph., A. B.
Morrison, Lewis French	Morgantown	Special A. & S.
Mortensen, Elna Belle	Morgantown	*Fr., A. B.
Mortan, Mary Vivian	Webster Springs	Soph., A. B.
Morton, Stephen Dixon	Camden-on-Gauley	*Fr., A. B.
Moser, Charles Yarnall	Terra Alta	Fr., A. B.
Moser, Frank Daniel	Smithfield, Pa.	Fr., A. B.
Motta, Peter George	Carnegia, Pa.	2nd Yr., Med.
Mountain, William Watson	Confluence, Pa.	Fr., B. S. E. E.
Mouser, Fred N.	Philippi	Fr., A. B.

Mowrey, Cassel	Clarksburg	Fr., A. B.
Moyle, Eugene Henry	Elkins	1st Yr., Med.
Huhleman, Gradys Grey	New Martinsville	Sen., A. B.
Muldoon, Gertrude Virginia	Shepherdstown	Sen., B. S. H. E.
Muncy, John Woolwine	Welch	1st Yr., Med.
Murphy, Bernard Gale	Morgantown	*Fr., A. B.
Murphy, Hickman Charles	Montrose	Fr., B. S. E. E.
Murphy, Michael Jennings	Runa	Soph., A. B.
Murphy, Robert Allen	West Union	*Fr., A. B.
Murray, Ella Louise	Hutchinson	Jun., A. B.
Musgrave, Charles Heaton	Parkersburg	*Fr., A. B.
Myer, Emma Margaret	Wellsburg	Fr., A. B.
Myers, Hu Crim	Philippi	Soph., A. B.
Myers, Ira Odell	Grafton	Jun., B. S. E. E.
Myers, Reed Folk	Shepherdstown	Fr., A. B.
Myers, Sarah Catherine	Core	Fr., A. B.
Mylius, Leslie Clair	Clarksburg	2nd Yr., Phar.
Mynes, Leo Howard	Charleston	2nd Yr., Med.
Nabors, Russell Milton	Morgantown	Fr., A. B.
Nageotte, Joseph Charles	Morgantown	Jun., B. S. Agr.
Nale, Helen Elizabeth	Morgantown	Jun., A. B.
Nale, Ruth Leyman	Morgantown	Fr., A. B.
Nale, Thomas William, Jr.	Morgantown	2nd Yr., Med.
Nardicci, Nickolas	Youngstown, O.	Fr., A. B.
Hash, Edwin Mann	Alderson	Fr., B. S. C. E.
Neal, Leonard Esker	Clarksburg	Soph., A. B.
Nease, Gifford Stuart	Charleston	Soph., B. S. E. E.
Neely, Mary	Jane Lew	Jun., A. B.
Nefflen, William Elliott	Keyser	3rd Yr., Law
A. B., West Virginia University, 1921		
Neifeld, Harold	Brooklyn, N. Y.	1st Yr., Med.
Nelson, Roy Ezekiel	Independence	Grad., Eng'g.
B. S. C. E., West Virginia University, 1921		
Nester, Parker Waitman	St. George	Voc., Agr.
Newcome, James Arthur	Keyser	1st Yr., Med.
Newell, Rachael Estella	Chester	Soph., A. B.
Newton, Hugh	Morgantown	Special A. & S.
Ney, Glenn Morris	Morgantown	*Fr., A. B.
Nicholls, Robert Gordon	Wellsburg	*Fr., B. S. E. E.
Nicholls, Sterling Wentzel	Morgantown	Soph., B. S. E. E.
Nicols, Margaret Elisabeth	Elkins	Jun., A. B.
Niedermeyer, Helen Louise	Wheeling	Fr., A. B.
Noble, Harold Lancelot	Grafton	*Fr., A. B.
Norman, Russ Harris	Clarksburg	Fr., B. S. M. E.
Nutter, Clarence Albert	Clarksburg	Fr., B. S. C. E.
O'Brien, John Edward	Wheeling	Fr, A. B.
O'Brien, Lee	Belington	*Fr., B. S. C. E.
Ocheltree, Agnes Katherine	Weston	Fr., A. B.
Olmstead, Herbert Francis	Wheeling	Fr., A. B.
Orr, John Lewis	Clarksburg	Soph., B. S. E. M.
Orr, Mildred Elsie	Morgantown	Fr., A. B.
Orr, William Otto	Morgantown	1st Yr., Law
Orth, John Malcom	Morgantown	1st Yr., Law
A. B., West Virginia University, 1917		

Osborne, Marjorie Willard	Davis	Soph., A. B.
Osmond, John Baines	Berkeley Springs	*Fr., B. S. Ch. E.
Ott, Maxwell Page	Lewisburg	*Fr., B. S. Agr.
Otto, Julia Elizabeth	Morgantown	Soph., A. B.
Owens, Ivan Clarke	Ivan	Sen., B. S. Agr.
Paden, William Doremus	Parkersburg	Soph., A. B.
Palmer, Bessie Mae	Bridgeport	Fr., A. B.
Palmer, Catharine Little	Cumberland, Md.	Soph., A. B.
Palmer, Kenneth Robert	Wheeling	Fr., B. S. C. E.
Parish, Doris Love	Worthington	*Fr., A. B.
Park, George	Blacksville	Fr., A. B.
Park, Robert Kirk	Ravenswood	Jun., B. S. E. E.
Parker, Paul Edward	Clarksburg	Jun., B. S. E. M.
Parker, Reland Marjorie	Rivesville	*Fr., B. S. H. E.
Patt, Ralph	Morgantown	Jun., B. S. C. E.
Paul, Charles Ferguson, Jr.	Wheeling	Jun., A. B.
Payne, Richard Franklin	Philippi	Sen., B. S. Agr.
Payne, Roxie Agnes	Bridgeport	Sen., A. B.
Pease, Horatio Thomas	Bethany	Sen., A. B.
Pell, Edward Norval, Jr.	Wheeling	Fr., A. B.
Pell, Van Elmis	Masontown	Voc., Agr.
Pena, Sergio Silvio	Punta, P. R.	1st Yr., Med.
Pennington, Gladys	Morgantown	Grad., A. & S.
A. B., West Virginia University, 1918		
Pentony, Hilda Vivian	Tunnelton	Soph., A. B.
Perfater, Bess Katherine	Sharon	Fr., A. B.
Perkins, Alma Lee	Newburg	*Fr., A. B.
Perry, Alberta Vail	Morgantown	*Fr., B. S. H. E.
Perry, Mary Martha Isabel	Harpers Ferry	Fr., A. B.
Perry, Raymond Edwin	Charleston	Fr., B. S. C. E.
Peters, Frank Elsworth	Moundsville	Soph, A. B.
Peters, Joseph Theodore	Princeton	*Fr., A. B.
Peterson, Arthur Horn	Romney	Jun., B. S. E. E.
Peterson, Myrtle	Buckhannon	Fr., B. S. H. E.
Pettigrew, Harry Alford	Summersville	Jun., A. B.
Petty, Louise Kirk	Hartford	Sen., A. B.
Phares, Eddie Brison	Riverton	Soph., B. S. Agr.
Pharr, Percy Paul	Gap Mills	Soph., A. B.
Phillips, Charles	New York, N. Y.	2nd Yr., Med.
Phipps, Edithe Rathwell	Fayetteville	Fr., B. S. H. E.
Pickett, Justus Courtland	Moundsville	*Fr., B. S. C. E.
Pierce, Leah Frances	Rowlesburg	*Fr., B. S. H. E.
Pierpont, Paul Kenneth	Fairmont	Soph., B. S. M. E.
Pinkney, Harry Dixon	Beckley	Fr., B. S. E. M.
Pippin, Irene Mae	Morgantown	Sen., A. B.
Pitman, Robert Edward	Bacon's Castle, Va.	Voc., Agr.
Pitsenberger, Charles Ezra	Pool	Jun., B. S. E. E.
Pitsenberger, Ira Albert	Pool	Soph., B. S. E. E.
Pittenger, Sarah Elizabeth	Newell	Fr., A. B.
Pletcher, Frank Moss	Cameron	*Fr., B. S. E. M.
Poling, Forrest Blanchard	Philippi	1st Yr., Law
A. B., West Virginia University, 1921		
Pollock, Robert A., Jr.	Fairmont	Fr., A. B.
Polsue, William Clewell	Charleston	Soph., A. B.
Pool, Willard Rezin	Charleston	3rd Yr., Law

Poorman, Nettie Luella	Wheeling	Fr., A. B.
Porter, James Robert	Weston	Soph., B. S. Agr.
Porter, Jean Williamson	Oak Hill	Jun., B. S. H. E.
Porter, Lloyd Garrison	Oak Hill	Jun., B. S. E. E.
Porterfield, Harold Francis	Bluefield	Fr., A. B.
Portman, Virginia Ethel	Morgantown	Fr., A. B.
Post, Pearl	Belington	Grad., A. & S.
A. B., West Virginia Wesleyan College, 1919		
Posten, Hale Judson	Morgantown	Soph., A. B.
Posten, Lillian	Morgantown	Fr., A. B.
Potter, Helen Salome	Greenwood	Sen., A. B.
Poundstone, James Stanley	Fairmont	Voc., Eng'g.
Powell, James Worley	Moundsville	Fr., A. B.
Pracht, Henry Kilbourne	Wheeling	*Fr., B. S. M. E.
Preiser, Philip	Charleston	Fr., A. B.
Prettyman, Joseph Earnest	Morgantown	Fr., B. S. Agr.
Price, Arthur Clyde	Smithfield	Jun., B. S. E. E.
Price, Charles Sanford	Morgantown	Jun., B. S. Agr.
Price, Donald Eugene	Morgantown	Fr., A. B.
Price, Fred Burke	Morgantown	Fr., B. S. Agr.
Price, John Raymond	Morgantown	Sen., A. B.
Price, Lando	Wilsonburg	Jun., B. S. Agr.
Price, Mabel Wilma	Morgantown	Jun., A. B.
Price, Paul Holland	Morgantown	Jun., A. B.
Price, Virginia Erwin	New Cumberland	Fr., A. B.
Price, William Spencer	Morgantown	Sen., B. S. E. M.
Prove, George Washington	Morgantown	Grad., Eng'g.
B. S., West Virginia University, 1921		
Pugh, Griffith Cyril	Morgantown	Soph., B. S. E. E.
Pugh, Joseph Lawrence	Morgantown	Soph., B. S. M. E.
Purpura, Anthony	Wheeling	Fr., A. B.
Pyles, Frederick Ray	Williamson	Soph., B. S. E. M.
Pyles, John Wylie	New Martinsville	Soph., A. B.
Pyles, Marshall Ashby	Alderson	Special A. & S.
Quarles, Charles Walthall	Weston	*Fr., A. B.
Quinlan, John James Nelson	Huntington	Fr., A. B.
Quinn, James Michael	Tunnelton	Soph., A. B.
Raemsch, Lawrence Edwin	Elkins	Jun., A. B.
Ralston, James Gilbert	Weston	Fr., A. B.
Ramirez, Rafael Santos	Caquas, P. R.	Fr., A. B.
Ramsay, Harry James	Mt. Pleasant, Pa.	Jun., B. S. C. E.
Ramsburg, Bernard Frederick	Weston	Soph., B. S. Agr.
Ramsey, Arley Wayne	Morgantown	Soph., A. B.
Ramsey, Cecil Lyle	Fayetteville	Voc., Phar.
Ramsey, Frank Burt	Mt. Lookout	Soph., B. S. M. E.
Randall, Drafe Edward	Parkersburg	Voc., Agr.
Rankin, Vernon Edwin	Berkeley Springs	2nd Yr., Law
Ratcliff, John Drury	Huntington	Fr., B. S. E. M.
Rathbone, Monroe Jackson	Parkersburg	*Fr., B. S. E. E.
Ratrie, John Stewart	Sistersville	Fr., B. S. C. E.
Rawe, Charles Edward	New Martinsville	Fr., B. S. M. E.
Raybeck, Thelma Belle	Morgantown	Fr., A. B.
Reaser, Edward Franklin	Huntington	Soph., A. B.
Reay, Margaret Virginia	Morgantown	Jun., A. B.

Rector, Mary Edna	Clarksburg	Fr., A. B.
Reddington, Lawrence Edward	Charleston	Soph., B. S. C. E.
Reed, Charlotte Hellice	Williamstown	Soph., B. S. H. E.
Reed, Edith Lucile	Morgantown	Fr., B. S. H. E.
Reed, Thomas Godfrey	Needmore	Soph., A. B.
Reed, William Eugene	Morgantown	Soph., A. B.
Reed, William Wayne	Morgantown	Fr., B. S. E. E.
Reeder, Benjamin Garnet	Morgantown	2nd Yr., Law
A. B., West Virginia University, 1921		
Rees, John Wendell	Welch	Soph., B. S. E. M.
Rega, Romeo Bernard	Mt. Pleasant, Pa.	Fr., B. S. E. E.
Reid, Effie Lee	Morgantown	Special A. & S.
Reid, Roswell Schell	Morgantown	Jun., A. B.
Reineke, Chester Edward	Wheeling	Special Phar.
Reith, Colin Wyland	Kingwood	*Fr., A. B.
Reynolds, Frances Elizabeth	Grape Island	Jun., B. S. H. E.
Reynolds, Knight	Keyser	1st Yr., Med.
Reynolds, Lester	Keyser	1st Yr., Med.
Reynolds, Vivian Gordon	Grafton	Grad., A. & S.
A. B., West Virginia University, 1921		
Reynolds, Wendell Sanford	Huntington	Jun., A. B.
Rhodes, Roy McKinley	Williamson	Soph., A. B.
Rice, Lacy Isaac	Berkeley Springs	Soph., A. B.
Rice, Ralph Leslie	Berkeley Springs	*Fr., A. B.
Rice, Worth Kirkwood	Berkeley Springs	Jun., A. B.
Richards, Arthur Thomas	Morgantown	Jun., B. S. E. E.
Richards, George Cochran	Piedmont	3rd Yr., Law
Richards, John Robert	Fairmont	Jun., B. S. E. E.
Richards, Marion Esther	Weston	Fr., B. S. H. E.
Richardson, Charles Joseph	Sistersville	Sen., A. B.
Rickey, John Whitcomb	Moundsville	Fr., B. S. E. E.
Riddle, Nathan Gilbert	Davis	Sen., A. B.
Riddle, Walter	Morgantown	Grad., A. & S.
A. B., West Virginia University, 1919		
Ridenour, Martin Clark	Kingwood	*Fr., B. S. E. E.
Rider, Nellie Morris	Morgantown	Grad., A. & S.
A. B., West Virginia University, 1907		
Ridings, Virginia Ellen	Morgantown	Fr., A. B.
Rierson, Edytha Annie	Bluefield	Soph., A. B.
Riggall, Arch John	Huntington	Fr., A. B.
Riggle, Hannah Gail	Middlebourne	Soph., B. S. H. E.
Riggle, Herbert Lee	Middlebourne	Jun., B. S. Agr.
Riggle, Herman Bee	Middlebourne	Jun., B. S. M. E.
Riggs, Howard Charles	Morgantown	Sen., A. B.
Riley, Robert Joseph	Wheeling	2nd Yr., Law
A. B., Georgetown University, 1920		
Rinard, Lillian Elaine	Grafton	Soph., A. B.
Rinehart, Louis Elbert	Belington	Fr., A. B.
Risher, Pearl Alda	Morgantown	Soph., B. S. H. E.
Ritchie, William Smith	Ravenswood	Sen., B. S. C. E.
Roach, Pearle Lucinda	New Cumberland	Fr., A. B.
Robb, Alexander Laing	Morgantown	*Fr., B. S. C. E.
Robb, Helen Madeline	Morgantown	Soph., A. B.
Robbins, James Minor	Morgantown	*Fr., B. S. C. E.
Robbins, Ola	Mannington	Soph., B.S.Ch.E.
Roberts, Charles Emmett	Morgantown	Soph., A. B.

Roberts, Ethel Louise	Monessen, Pa.	Fr., A. B.
Roberts, James Egbert	Charleston	1st Yr., Med.
Roberts, Louis Rorer, Jr.	Parkersburg	Soph., A. B.
Roberts, William Ernest	St. Albans	Jun., A. B.
Robertson, Cue Albert	Clendenin	Fr., A. B.
Robertson, Harold Brooks	Clarksburg	Fr., A. B.
Robinson, Anthony Hall	Freemansburg	Fr., B. S. E. E.
Robinson, Clara Lenore	Morgantown	Sen., A. B.
Robinson, Edith Leona	Wheeling	Soph., A. B.
Robinson, Forrest Aubra	Elkins	Fr., B. S. E. E.
Robinson, Harry Grayden	Philippi	Sen., A. B.
Robinson, Harry Walker	Morgantown	2nd Yr., Phar.
Robinson, Robert West	Newell	Fr., A. B.
Robinson, Virginia Eleanor	Monongah	Jun., A. B.
Robinson, Wallace Frederick	Spotsylvania, Va.	Voc., Agr.
Robison, Mildred Belle	Pt. Marion, Pa.	Soph., A. B.
Roby, Hobart	Petersburg	Sen., A. B.
Roca, Julio Cesar	Yauco, P. R.	Fr., A. B.
Rocke, Herman Obenshan	Troutsville, Va.	Voc., Agr.
Rockey, John Perry	Newark, N. J.	Fr., A. B.
Roden, Harry	St. Marys	Fr., B. S. C. E.
Rodgers, Harold William	Clarksburg	Jun., B. S. M. E.
Rogers Alma Sophia	Morgantown	Fr., A. B.
Rogers, James Mathew	Orlando	Voc, Agr.
Rogers, Mary Belle	Morgantown	Fr., A. B.
Rokos, Marcalus Matthew	Morgantown	Sen., B. S. M. E.
Rolley, Guy Clare	Morgantown	Soph., B. S. E. E.
Rollings, Harry West, Jr.	Lost City	Soph., A. B.
Root, Margaret Jane	Morgantown	*Fr, B. S. H. E.
Ropp, Clarence Daniel Luther	Martinsburg	Grad., A. & S.
A. B., West Virginia University, 1921		
Ropp, Walter Paul	Martinsburg	*Fr., B. S. E. E.
Rosier, Robert	Fairmont	Soph., B. S. E. E.
Ross, Ruth Belle	Fairmont	Fr., A. B.
Ross, Sara Crawford	Shinnston	Fr., A. B.
Rossey, Lucy Burton	Athens	Jun., A. B.
Roth, Emanuel	Brooklyn, N. Y.	Soph., A. B.
Rothlisberger, Floyd Frederick	New Martinsville	Soph., B. S. Agr.
Roush, Dallas Samuel	Huntington	Fr., B. S. E. E.
Roush, George Harold	Fairmont	Sen., A. B.
Rouzer, Paul Charles	Morgantown	Grad., Agr.
B. S. Agr., University of Wisconsin, 1912		
Rowe, Estelle	Meyersdale, Pa.	Soph., A. B.
Rowland, Joseph Kins	Princeton	1st Yr., Med.
Rowley, Homer King	Shinnston	Sen., B. S. Agr.
Ruckman, Harold	Mason City	Fr., A. B.
Rufener, Helen Beatrice	Morgantown	Special, A. & S.
Rutan, Carroll Wright	Ellsworth, Pa.	Fr., B. S. C. E.
Rutherford, John Mateer	Cambridge, Ohio	Jr., B. S. M. E.
Ruttencutter, Lucille Ida	St. Marys	Soph., A. B.
Ryan, Paul Francis	Mannington	Jun, A. B.
Ryan, William St. Clair	Spencer	2nd Yr., Law
Rymer, Hosea Ralph	Harrisville	Soph., B. S. Agr.
Rymer, Lucile	Harrisville	Soph., B. S. H. E.

Saari, George John	Weirton	Fr., B. S. E. E.
Salvati, Leo Harry	Monongah	2nd Yr., Med.
Salvati, Raymond Ernest	Monongah	Sen., B. S. E. M.
Sander, John William	Wheeling	Soph., B.S.Ind.E.
Sanders, Carl Custer	Philippi	3rd Yr., Law
Sanders, John Vernon	Morgantown	Fr., A. B.
Sanders, Ulvert Ottway	Oceana	Special Med.
Sanderson, Alene Regina	Elkins	Sen., A. B.
Sankbeil, William Frank	Sabraton	Voc., Agr.
Sapp, Mary Louise	Morgantown	Sen., A. B.
Sapp, Virginia Dare	Morgantown	Soph., A. B.
Saum, Blanche Pittman	Keyser	*Fr., A. B.
Savage, Joseph Whitney	Charleston	Soph., A. B.
Sayre, Floyd McKinley	Ripley	3rd Yr., Law
Schaffner, Edward Thomas	Wheeling	Jun., A. B.
Schilling, John Griffith	Morgantown	Jun., A. B.
Schlens, Fred Alexander	Morgantown	Soph., A. B.
Schmeichel, Emilie L. A.	Morgantown	Jun., A. B.
Schnopp, Walter Clinton	Hazelton	Special Agr.
Schoenholtz, George	New York, N. Y.	1st Yr., Med.
Schramm, Alberta Viola	Cumberland, Md.	Soph., B. S. H. E.
Schroeder, Clarence F., Jr.	Grafton	Jun., A. B.
Schultz, Mary Jeannette	Morgantown	Soph., B. S. H. E.
Scott, Albert B., Jr.	Morgantown	Fr., A. B.
Scranage, Gladys Mae	Grafton	*Fr., B. S. H. E.
Seabrught, Virginia Henry	Roneys Point	Fr, A. B.
Seaman, Anna Thelma	Morgantown	Soph., B. S. H. E.
See, Arthur Andrew	Brake	Voc. Agr.
Selbe, Paul Benton	St. Albans	Soph., B. S. C. E.
Selby, Allen Luther	Morgantown	Voc. Agr.
Selby, Harlan Bovell	Morgantown	Sen., A. B.
Sellers, Eugene Brownfield	Morgantown	Fr., A. B.
Setron, Joseph Louis	Parkersburg	Soph., B. S. E. M.
Sevy, Heber Powell	Oak Hill	Jun., B. S. Agr.
Sevy, Pansy Lorraine	Oak Hill	Jun., B. S. H. E.
Shafer, Paul Noble	Independence	Voc. Agr.
Shafer, Foster C.	Windber, Pa.	1st Yr., Med.
Shaffer, Harry Morse	Aurora	Jun., A. B.
Shaffer, James Harvey	Morgantown	Grad., Agr.
B. S. Agr., West Virginia University, 1921		
Shaffer, Ross Glenn	Terra Alta	Voc. Agr.
Shaffer, Walter Elmer	Morgantown	Fr., A. B.
Shaid, Evelyn Sue	Elkins	Soph., A. B.
Shaid, Florence Anne	Elkins	Soph., A. B.
Shannon, Mayte Pearl	Charleston	Fr., A. B.
Sharpe, William Malcolm	St. Albans	Fr., A. B.
Sharpless, Constance Jane	Martinsburg	Fr., A. B.
Sharps, Amos Beaty	Lumberport	Fr., A. B.
Sharps, Hazel	Masontown	Fr., A. B.
Shaw, Beryl May	Morgantown	Jun., A. B.
Shaw, Victor Harry	Fairmont	3rd Yr., Law
Shay, Paris	Tunnelton	Sen., A. B.
Sheesley, George Maxwell	Johnstown, Pa.	Fr., A. B.
Sheets, Paul Faris	Bridgeport	Soph., A. B.
Sherman, Maurice Aaron	Hazelwood, Pa.	2nd Yr., Med.
Sherrard, Adele Flora	Weston	Fr., A. B.

Shinn, Hugh Sherwood	Belington	Sen., B. S. E. E.
Shirey, Mary Marshall	Union	Soph., A. B.
Shirey, William Brown	Union	Grad., A. & S.
A. B., West Virginia University, 1921		
Shock, Albert Bernard	Falls Mill	*Fr., B. S. Agr.
Shomaker, Lloyd Carlton	Morgantown	Fr., B. S. Agr.
Shore, Ernest Luke	Keyser	1st Yr., Med.
Shore, Henrietta Margaret	Keyser	Soph., A. B.
Shore, John James	Parkersburg	Soph., B. S. Agr.
Short, Alex Walker, Jr.	Hanging Rock, Ohio	Voc., Agr.
Short, Joseph Wade	Morgantown	Fr., A. B.
Shorter, Paul McKinney	Brookneal, Va.	Voc., Agr.
Shott, Hugh Ike, Jr.	Bluefield	Soph., A. B.
Shoup, Lydia Louise	Coraopolis, Pa.	*Fr., A. B.
Showalter, Forrest Pearl	Denver, Colo.	1st Yr., Law
Shrewsbury, Hobart Graham	Charleston	Soph., B. S. C. E.
Shriver, Leland Clarence	Morgantown	Fr., B. S. C. E.
Shugart, Gervis Gardner	Harper's Ferry	Soph., A. B.
Shughrou, James Leo	Ronceverte	Sen, B. S. C. E.
Shughrou, Nelle Catharine	Ronceverte	2nd Yr., Med.
Shuttleworth, Wayne Stacy	Fairmont	1st Yr., Law
Sidell, Alonzo Russell	New Martinsville	Fr., A. B.
Sidell, Rhea Mabel	New Martinsville	Soph., B. S. H. E.
Siegel, Samuel	Cleveland, Ohio	2nd Yr., Med.
A. B., Western Reserve University, 1921		
Simanofsky, Joseph Jacob	Cleveland, Ohio	2nd Yr., Med.
Simmons, Eli Odel	Fairplain	*Fr., A. B.
Simons, Fred Stewart	New Cumberland	*Fr., A. B.
Simpson, Agnes Virginia	Morgantown	Fr., B. S. H. E.
Simpson, William Forbes	Wheeling	3rd Yr., Law
Sinclair, Donald Brown	Wheeling	1st Yr., Phar.
Sine, Hiram Kent	Blacksville	Soph., A. B.
Sizer, Ruby Lucile	St. Albans	*Fr., A. B.
Skaggs, Pauline Thelma	Summersville	Sen., A. B.
Skarzinski, Stanley John	Monongah	1st Yr., Med.
Skidmore, Hazel Irene	Flatwoods	*Fr., A. B.
Slaven, Garnet Cosby	Oak Hill	Soph., B. S. C. E.
Sloan, James Joseph	Fairmont	1st Yr., Phar.
Small, Richard Henry	Martinsburg	Fr., A. B.
Smith, Edward Kraft	Wheeling	*Fr., B. S. Ch. E.
Smith, Edwin Garrison	Wadestown	*Fr., B. S. M. E.
Smith, Emmet Irwin	West Union	Sen., B. S. Agr.
Smith, Erlyn L.	Morgantown	*Fr., B. S. E. M.
Smith, Eula Fay	Harrisville	*Fr., B. S. H. E.
Smith, George Andrew	Wellsburg	Fr., B. S. C. E.
Smith, Hattie May	Flemington	Jun., A. B.
Smith, Homer Lee	Chester	Soph., B. S. M. E.
Smith, Ida Bocock	Ronceverte	Sen., A. B.
Smith, James Albert, Jr.	Albert	Soph., B. S. C. E.
Smith, James Elmer	Uffington	Voc Agr.
Smith, John Blackshere	Clarksburg	*Fr., A. B.
Smith, John Macel	Bluefield	Fr., A. B.
Smith, Joseph Meinecke	Hawthorne, N. J.	*Fr., A. B.
Smith, Lowery Charles	Parkersburg	Voc. Agr.
Smith, Mattie Mary	White Sulphur Spr.	Fr., A. B.
Smith, Mildred	St. Marys	Soph., A. B.

Smith, Millard Filmore	Elm Grove	Fr., B. S. Agr.
Smith, Paul Amos	West Union	*Fr., B. S. C. E.
Smith, Richard Williams	Pittsburgh, Pa.	Soph., A. B.
Smith, Rose Gertrude	Morgantown	Soph., A. B.
Smith, Ruth Olive	Grafton	Soph., A. B.
Smith, Sherman	Shively	Voc. Agr.
Smith, Susie Pocahontas	Hillsboro	*Fr., A. B.
Smith, Virginia Lee	Morgantown	Fr., A. B.
Smithey, Mabel Constance	Morgantown	Special H. E.
Smyth, Olin Darius	Morgantown	Soph., B. S. M. E.
Smyth, Walter Alexander	Sistersville	Soph., B. S. M. E.
Snedegar, Delpha Agnes	Marlinton	Fr., A. B.
Snider, Elsie Kilbreth	Keyser	Soph., A. B.
Snodgrass, Pearl	Smithfield	Soph., A. B.
Snooks, Rupert John	Powellton	Jun., B. S. C. E.
Snyder, Arthur Gail	Sabraton	Soph., B. S. Agr.
Snyder, Charles	Hundred	Soph., B. S. E. E.
Snyder, Dorothy Caroline	Masontown	Fr., A. B.
Snyder, Harry Lambright, Jr.	Shepherdstown	Jun., A. B.
Snyder, John Edgar	Bentleyville, Pa.	Fr., B. S. C. E.
Snyder, Laura Marie	Keyser	*Fr., A. B.
Snyder, Martha Gladys	Morgantown	Jun., A. B.
Snyder, Melvin Claud	Albright	2nd Yr., Law
Sommer, Karl Frederick	Sutton	Soph., B. S. M. E.
Sommerville, Hazel Eulah	Lost Creek	Soph., B. S. H. E.
Sorg, Louis Jacob	Parkersburg	*Fr., B. S. E. E.
Sorrent, John Baptist	Holden	*Fr., B. S. M. E.
Spangler, Pauline Richardson	Peterstown	Jun., A. B.
Spangler, Robert Clifton	Morgantown	Grad., A. & S.

A. B., West Virginia University, 1914; A. M., ibid, 1916.

Spaur, Klayde Beatrice	Grafton	Jun., A. B.
Specht, Randolph Chillian	St. Albans	Soph., B.S.Ch.E.
Speiden, Henry Withers	Bluefield	Fr., B. S. C. E.
Spelsberg, Walter	Clarksburg	1st Yr., Med.
Spencer, James De Vore	Mannington	Fr., A. B.
Spiker, Mary Ethel	Piedmont	Fr., A. B.
Spindler, Garold Ralph	Kingwood	Soph., B. S. M. E.
Spinks, Blanche	Summersville	Fr., A. B.
Sprigg, Frances Catherine	Holly	Soph., B. S. H. E.
Staeck, Felix Cecil	McMechen	2nd Yr., Med.
Staley, James Henry	Kenova	2nd Yr., Phar.
Stalnaker, Cecil Martin	Parsons	Jun., B. S. Agr.
Stalnaker, Ronald Luvic	Parsons	*Fr., A. B.
Stanhagen, Irene Mary	Fairmont	Soph., A. B.
Stanley, Robert Julian	St. Marys	Fr., A. B.
Starcher, Everett Hanley	Ripley	1st Yr., Med.
Starcher, Harold Eugene	Ripley	*Fr., A. B.
Starkey, Archie Lemuel	Wallace	*Fr., A. B.
Stathers, Hugh	Buckhannon	*Fr., A. B.
Statler, John Alfred	Pennsboro	Fr., A. B.
Staub, Philip Alfred	Morgantown	*Fr., B. S. E. E.
Stealey, Carline	Fairmont	Soph., A. B.
Steele, Ernest Clark	Morgantown	Soph., A. B.
Steele, French	St. Marys	Soph., B. S. Agr.
Steele, Paul Dewey	Apollo, Pa.	1st Yr., Med.

Steele, Tie Earnest Newton	Hebron	Soph., B. S. Agr.
Steenbergen, John Daniel	Pt. Pleasant	Fr., B. S. Agr.
Stein, George Alvin	Wheeling	Soph., B.S.Ch.E.
Steinbicker, Paul Frederick	Wheeling	Fr., A. B.
Steinmetz, George Christian	Wheeling	*Fr., A. B.
Stemple, Dayton Reuben	Philippi	1st Yr., Law
Stephens, Genevieve Hoy	Worthington	Soph., A. B.
Stephens, Harry Helferstay	Martinsburg	Soph., B. S. C. E.
Stephens, Tracy Ralston	Morgantown	Soph., B. S. C. E.
Stephenson, John Edward	Clarksburg	Fr., A. B.
Stevens, Gilbert Troy	Morgantown	Voc., Agr.
Stevenson, Charles Alexander	Morgantown	Fr., A. B.
Stewart, James Warren	Clarksburg	Sen., B. S. E. M.
Stewart, Mary	Morgantown	Sen., A. B.
Stewart, Merrie Marguerite	Morgantown	Grad., A. & S.
A. B., West Virginia University, 1921		
Stewart, Newell Williamson	Sistersville	1st Yr., Phar.
Stewart, Thomas Nelson	Morgantown	Fr., A. B.
Stickler, Charles Lester	Oak Hill	Soph., B. S. Agr.
Stickler, Merton Harvey	Oak Hill	Soph., B. S. C. E.
Stobbs, Henry Alpheus	Wheeling	Sen., B. S. Ch. E.
Stockdale, Charles Ellsworth	Morgantown	Grad. Agr.
B. S. Agr., West Virginia University, 1916		
Stockert, Ida Clay	Burnsville	Sen., B. S. H. E.
Stollings, Garnette Jennings	Stollings	Soph., B. S. E. M.
Stone, Frederic Arol	Morgantown	Jun., A. B.
Stoner, Louis Douglas	Whipple	*Fr., A. B.
Stoops, Hurford	Wellsburg	Fr., A. B.
Stout, Alexander	Clarksburg	Soph., A. B.
Stout, Malden Dallas	Clarksburg	Grad., A. & S.
A. B., West Virginia University, 1921		
Strader, Audra Dow	Buckhannon	Voc., Agr.
Straight, Hazel Roberts	Mannington	Jun., A. B.
Straight, Herschel Bryan	Rivesville	Jun., A. B.
Straight, Joseph J.	Rivesville	*Fr., B. S. Agr.
Street, Lawrence Park	Belington	*Fr., B. S. C. E.
Strickler, Thomas G., Jr.	Pennsboro	Fr., A. B.
Strobel, Curtis Tyler	Wheeling	Fr., B. S. Ch. E.
Strother, Lucinda Margaret	Weston	Soph., B. S. H. E.
Stuart, Agnes Catharine	Morgantown	Fr., A. B.
Stuart, Susie Walkup	Sinks Grove	*Fr., B. S. H. E.
Stuckey, Forrest Noble	Martinsburg	Fr., A. B.
Stuckey, Harry Jeremiah	Hedgesville	Grad., A. & S.
A. B., West Virginia University, 1916		
Stump, Golden June	Stumptown	Jun., B. S. H. E.
Stump, Katharine Casey	Romney	Jun., B. S. H. E.
Stump, Noah Franklin	Yoe, Pa.	Grad., A. & S.
B. S. Ind. Ed., West Virginia University, 1921		
Stump, Wilbur Dale	Charleston	Jun., B. S. E. E.
Sturgiss, Margaret	Morgantown	Fr., A. B.
Sturm, Joseph Arthur	Enterprise	Fr., B. S. Agr.
Suder, Anthony Francis	Thomas	Fr., A. B.
Summers, Festus Paul	Lockwood	Jun., A. B.
Summers, John Charles	Charleston	Fr., A. B.
Summers, Roy Roosevelt	Clendenin	Fr., A. B.
Swann, Clarence Calvary	Barboursville	Voc. Agr.

Swecker, Elsie Bartlett	Morgantown	Soph., B. S. H. E.
Swecker, Flora Jane	Century	Soph., A. B.
Sweeny, Anne Wilson	Williamstown	Soph., A. B.
Sweeny, Virginia Reid	Williamstown	Fr., A. B.
Swiger, Willabelle	Morgantown	*Fr., A. B.
Swisher, John Hugh	Sutton	Fr., B. S. M. E.
Swisher, Lucy May	Morgantown	Fr., A. B.
Swisher, Thomas Hyer	Sutton	Sen., B. S. M. E.
Tabler, Lee Douglas	Martinsburg	Soph., B. S. E. E.
Tahaney, Mary Rebecca	Keyser	Soph., A. B.
Talbott, Agnes Gertrude	Fairmont	Jun., B. S. H. E.
Talbott, Esker Wayne	Philippi	2nd Yr, Law
Talbott, Richard Bosworth	Elkins	2nd Yr., Med.
Tallman, Charles Cameron	Beech Hill	Fr., A. B.
Tanner, Gerald Darland	Morgantown	Sen., A. B.
Tarleton, Arban Calvin	Watson	*Fr., B. S. E. E.
Tarleton, Edna Virginia	Watson	Soph., B. S. H. E.
Tate, Charles Odbert	Harrisville	Voc., Agr.
Taylor, Elba Olin	Morgantown	Fr., A. B.
Taylor, Elber Wilson	Hinton	Sen., A. B.
Taylor, Harry Reeves	Keyser	Soph., A. B.
Taylor, Henry Myers	Bethany	Soph., B. S. Agr.
Taylor, James Lawrence	Grantsville	Fr., A. B.
Taylor, Lynn Arden	Masontown	Sen., B. S. Agr.
Taylor, May Jackson	Elkins	Sen., A. B.
Taylor, Maybelle Ruth	Masontown	Fr., A. B.
Taylor, Roscoe Shirley	Morgantown	Special Law
Taza, Leon James	Kane, Pa.	Soph., B. S. E. E.
Teagarden, Ersie Van	Cameron	Soph., A. B.
Tebay, Bernice Mary	Parkersburg	Jun., A. B.
Tebay, Howard Amos	Parkersburg	Fr., B. S. Agr.
Temple Frederick Arthur	Huntington	*Fr., B. S. E. M.
Templeton, Carl James	New Martinsville	Fr., A. B.
Tennant, Edna	Wadestown	Jun., B. S. H. E.
Tennant, Raymond Jefferson	Morgantown	Soph., B. S. E. E.
Thayer, John M.	Grafton	Fr., A. B.
Thomas, Clyde Dana	Clendenin	1st Yr., Phar.
Thomas, Joseph William	Charleston	1st Yr., Law
Thomas, Margaret	Parkersburg	Sen., A. B.
Thomas, Trevor Roosevelt	Monessen, Pa.	Fr., B. S. C. E.
Thompson, Benjamin Frank	Davis	Fr., B. S. Agr.
Thompson, Carl Truman	Morgantown	Fr., A. B.
Thompson, Elizabeth Arlene	Florefee, Pa.	Fr., A. B.
Thompson, Forest Rutledge	Morgantown	Soph., A. B.
Thompson, Martha Anne	Sinks Grove	Fr., B. S. H. E.
Thompson, Myrl Jenkins	Romney	*Fr., A. B.
Thompson, Velma Julia	Morgantown	Fr., A. B.
Thornton, James Linten	Bluefield	Jun., B. S. M. E.
Thurmond, James Russell	Webster Springs	Fr., B. S. M. E.
Tierney, Josephine Clair	Weston	Fr., A. B.
Tierney, Mark	Clarksburg	Fr., A. B.
Timothy, Thomas Charles	Chester	Fr., B. S. E. M.
Todorovich, Srboljub	Kragujevac, Serbia	Soph., B.S.Agr.E.
Toler, Jesse Lee	Mullens	Jr., A. B.
Toler, Lessie Ophelia	Mullens	Fr., A. B.

Torruellas, Severo Rafael	Coquas, P. R.	Soph., A. B.
Torry, Gail Mildred	Morgantown	Fr., A. B.
Towson, Charles Emory	Fairmont	1st Yr., Med.
Towson, Ira Gladstone	Fairmont	1st Yr., Med.
Treweek, John Spargo	Wheeling	Soph., B. S. M. E.
Trotter, Eleanor Agnes	Washington, D. C.	Jun., A. B.
Trotter, James Francis	Morgantown	Fr., B. S. C. E.
Trotter, John Heermans	Morgantown	Fr., A. B.
Trotter, Katharine Elizabeth	Washington, D. C.	Sen., A. B.
Trotter, Martha Elizabeth	Morgantown	Sen., A. B.
Trump, Fannie Marshall	Kearneysville	*Fr., A. B.
Trump, John Sheldon	Oak Hill	Fr., A. B.
Tucker, John Wyland	Morgantown	Jun., A. B.
Tuckwiller, Pat Alexander	Morgantown	Fr., A. B.
Turkovich, Matthew	Monongah	Sen., B. S. C. E.
Turner, Carrell Henry	Belington	*Fr., A. B.
Turner, Wallace Raymond	Parkersburg	Fr., A. B.
Underwood, Thomas Miller	Fairview	Voc. Eng'g.
Valentine, Mark Twain	Parsons	3rd Yr., Law
Van Camp, Homer Leon	Paden City	Fr., A. B.
Vandervort, Virginia Maud	Weston	Soph., A. B.
Van Metre, Robert Stuart	Martinsburg	1st Yr., Med.
Vanmetre, Thomas Henry, Jr.	Martinsburg	Soph., B. S. Agr.
Van Reenen, Albert Cecil	Onoto	2nd Yr., Med.
Vassar, James Alfred	Weston	Soph., A. B.
Vaught, William Henderson, Jr.	Pt. Pleasant	*Fr., A. B.
Via, Robert Everett	White Sulphur Spr.	*Fr., B. S. Agr.
Vickers, Fanny Clay	Morgantown	Sen., A. B.
Vickers, Walter Howard	Morgantown	Soph., A. B.
Vincent, William Virgil Jackson	Fairmont	Fr., A. B.
Virgin, Courtney Clark	Wheeling	Sen., B. S. E. M.
Wade, Bryan Lewellyn	Star City	Jun., B. S. Agr.
Wade, John Alexander	Morgantown	Fr., A. B.
Wade, Perry William	Core	Voc., Agr.
Wade, Rebecca Estra	Morgantown	Fr., A. B.
Wadsworth, Howard Jesse	Morgantown	Sen., A. B.
Waggoner, Festus Clee	Harrisville	Jun., B. S. Agr.
Walden, George Washington	Griffithsville	Fr., A. B.
Walker, Albert Kiddy	Sutton	2nd Yr., Phar.
Walker, Jane Russel	Wellsburg	Soph., A. B.
Walker, Leon Brook	Morgantown	Soph., A. B.
Walls, Lester Aura	Shinnston	*Fr., B. S. E. E.
Walters, Nellie	Macdonald	Fr., A. B.
Ward, Frank Carroll	Mill Creek	*Fr., B. S. Agr.
Warden, Erskine	Oak Hill	1st Yr., Phar.
Warder, Francis Lucas	Grafton	Fr., A. B.
Ware, Paul Blackburn	Philippi	Soph., A. B.
Warfield, Lorna Lucile	Folsom	*Fr., A. B.
Washington, William Colvin	Morgantown	Soph., A. B.
Watkins, Cassie	Elkins	Sen., B. S. H. E.
Watkins, David	Buckhannon	Fr., A. B.
Watkins, Harry Evans	Monongah	2nd Yr., Law
Watkins, Verne	Grafton	*Fr., B. S. Agr.

Watson, Dorothy Elizabeth	Morgantown	Sen., A. B.
Watson, Paul William	Tunnelton	Soph., A. B.
Watson, Robert Lamb	Fairmont	Fr., A. B.
Watson, Thomas Mahan	Follansbee	Fr., A. B.
Watson, William Rinehart	Morgantown	Jun., A. B.
Watts, Sara Morgan	Fairmont	Soph., A. B.
Waugh, Norval Dow	Clarksburg	Special Law
Wayman, Robert Newton	New Martinsville	Fr., B. S. M. E.
Wayt, David Francis	West Liberty	Fr., B. S. C. E.
Weaver, Mary McKinley	Morgantown	Special A. & S.
Weeda, Dewey	Follansbee	Fr., A. B.
Wees, Donald Stuart	Elkins	Soph., A. B.
Weese, Willa Hopkins	Richwood	Fr., A. B.
Weik, Emerson George	Huntington	*Fr., A. B.
Weiler, Howard George	Huntington	Fr., A. B.
Weiler, Lawrence Joseph	Huntington	Soph., B. S. C. E.
Welch, William Hamilton	Fairmont	Fr., B. S. E. E.
Welton, Wright Montgomery	Piedmont	Fr., A. B.
West, Fenton Tyree	Spencer	*Fr., B. S. Agr.
West, John Thomas	Morgantown	Grad., A. & S.
B. S., West Virginia University, 1907		
West, William Oliver	Clarksburg	Fr., B. S. E. E.
Westfall, Wilbur Wood	Walkersville	1st Yr., Med.
Westover, Kyle Chester	Manchester, N. H.	Grad., Agr.
B. S., New Hampshire College, 1917		
Westrater, Charles William	Martinsburg	Fr., B. S. M. E.
Wetzel, Columbus Lon	Clarksburg	Fr., A. B.
Wetzel, Margaret Ellen	Spencer	Fr., A. B.
Whaley, Ellis Burton	Finch	Grad., A. & S.
A. B., West Virginia University, 1920		
Wheeler, Jerrold Ellsworth	Elkins	Sen., B. S. C. E.
Wheeler, Ruth Cecilia	Rowlesburg	Jun., A. B.
Wheeler, Vernon Olan	Morgantown	Sen., B. S. M. E.
Whetsel, Bernice	Fayette City, Pa.	Jun., A. B.
White, Ada	Philippi	*Fr., A. B.
White, Chester Ross	Kingwood	Jun., B. S. Agr.
White Clyde Vickers	Morgantown	Soph., B. S. C. E.
White, Frank Luther	Wadestown	*Fr., B. S. Ch. E.
White, James Horn	Richwood	Soph., A. B.
White, Julius Sylvester	Dry Fork	Voc. Agr.
White, Lyall Luther	St. Albans	Fr., A. B.
White, Lyle Frazier	Williamson	Fr., A. B.
White, Mamie Florence	Minnehaha Springs	Fr., A. B.
White, Marie Christine	Richwood	Jun., A. B.
White, Orville Dewey	Kingwood	Sen., B. S. Agr.
White, Stanley Ray	Morgantown	2nd Yr., Med.
White, Wilson Henry Stout	Shepherdstown	Grad., A. & S.
B. S., Ohio State University, 1916		
Widmeyer, Robert Samuel	Martinsburg	1st Yr., Med.
Wieda, Margaret Katherine	Moundsville	Soph., A. B.
Wilbourn, Robert Gregg	Morgantown	Fr., B. S. C. E.
Wilcox, Maurice Kenneth	West Union	*Fr., A. B.
Wilkinson, James Eppleye	Baltimore, Md.	Fr., B. S. E. M.
Willhide, Victor Cole	Grafton	*Fr., B. S. Ch. E.
Williams, Reuna Madge	Bridgeport	Soph., B. S. H. E.
Williams, Charles Early	St. Marys	Fr., B. S. M. E.

Williams, Cornelia May	Morgantown	Fr., A. B.
Williams, Edgar	Morgantown	1st Yr., Law
A. B., West Virginia University, 1913		
Williams, Harriett	Monessen, Pa.	Fr., A. B.
Williams, Leonard Gray	Morgantown	Fr., A. B.
Williams, Madelyn	Welch	Soph., A. B.
Williams, Mary Catherine	Ravenswood	*Fr., B. S. H. E.
Williams, Nell McCoy	St. Marys	Jun., A. B.
Williams, Paul Henry	Ravenswood	Jr., B. S. E. M.
Williams, Vita Lee	Morgantown	Soph., A. B.
Williamson, Odas Delphia	Morgantown	Jun., B. S. H. E.
Willis, Haymond Charles	Morgantown	*Fr., A. B.
Wilson, Elsie Mable	Wheeling	Jun., A. B.
Wilson, Eva Margaret	Belington	Fr., A. B.
Wilson, James Everett	Roanoke	Jun., B. S. Agr.
Wilson, Johnathan Hollis	Blaine	Fr., A. B.
Wilson, Kathleen Virginia	Morgantown	Fr., A. B.
Wilson, Orris Raymond	Kingwood	*Fr., B. S. E. E.
Wilson, Paul Russell	Wilson	2nd Yr., Med.
Wilson, Philip Clarence	Spencer	Soph., A. B.
Wilson, Varina Maree	Hinton	Soph., A. B.
Wilson, William Charles, Jr.	Perth Amboy, N. J.	Fr., B. S. C. E.
Wilt, Ruth Elisabeth	Elkins	Jun., A. B.
Wilt, Wilson Jared	Parsons	Fr., B. S. M. E.
Winkler, Henry Jacob	Pickens	2nd Yr., Med.
Winkler, Morris	Sharon, Pa.	Jun., A. B.
Winter, Arnold Austin	St. Albans	Soph., B. S. E. E.
Winter, Gladys Naomi	St. Albans	*Fr., B. S. H. E.
Winter, Rupert Edward	Bridgeport	Jun., B. S. Agr.
Winters, Wilbur Addison, Jr.	Harper's Ferry	*Fr., A. B.
Wirt, Richard McCosh	Morgantown	Fr., A. B.
Wise, Berenice Claire	Cameron	Soph., A. B.
Wiseley, Frank McLeod	Findlay, Ohio	2nd Yr., Med.
Withers, Charles Hereford	Hogsett	Jun., A. B.
Withers, Lelia	Grafton	Fr., A. B.
Witt, Edward Tempest	Northfork	*Fr., B. S. E. E.
Wolfe, Karl Morgan	Kingwood	*Fr., B. S. E. E.
Wolfe, Lucy Malinda	Pt. Pleasant	Fr., A. B.
Wolfe, Rose Jeane	Morgantown	Soph., A. B.
Wolford, Grace Louise	Morgantown	Sen., B. S. Agr.
Wolpert, Milton	Charleston	Fr., A. B.
Woodburn, Dorothy Mary	Parkersburg	Fr., A. B.
Woods, John Fulton	Princeton	Fr., A. B.
Woods, Neeson Canter	Philippi	*Fr., B. S. C. E.
Worden, Leo Francis	Davis	Fr., B. S. C. E.
Work, William Frank	Blue Creek	Soph., A. B.
Wotring, Mary Elizabeth	Kingwood	Fr., A. B.
Wright, Ethel Fae	Cameron	Soph., A. B.
Wright, Evelyn Manette	Morgantown	Fr., A. B.
Wright, Florence Anna	Cameron	Grad., A. & S.
B. SS., Ohio State University, 1916		
Wright, Glenn Merrill	Core	Soph., B. S. Agr.
Wright, Martin Edwin	Warwood	*Fr., B. S. E. E.
Wright, Russell Eashmul	Monongah	Soph., A. B.
Wylie, Ward	Gap Mills	*Fr., A. B.

Yates, Dwight Randolph	Charles Town	*Fr., B. S. E. E.
Yeager, Curt Edward	Pt. Pleasant	Voc., Agr.
Yost, John Paul	Fairmont	2nd Yr., Law
Ph. B., University of Chicago, 1920		
Yost, Paul	Fairmont	1st Yr., Med.
Young, Harold Glynn	Moundsville	1st Yr., Med.
Zearley, Gay Elizabeth	Morgantown	Soph., B. S. Agr.
Zearley, Joy	Morgantown	Grad., A. & S.
A. B., West Virginia University, 1920		
Zeh, Helen Louise	Wheeling	Fr., A. B.
Zerner, Samuel Thomas, Jr.	Wilkinsburg, Pa.	*Fr., A. B.
Zerner Herbert	New York, N. Y.	2nd Yr., Med.
Ziler, Philip Ward	Elkins	Fr., B. S. E. E.
Zimmerman, Flora Felton	Morgantown	Grad., A. & S.
A. B., West Virginia University, 1920		
Zinn, Ervin Stephen	Lumberport	Fr., B. S. Agr.
Zinn, George Hiner	Lumberport	Soph., B. S. Agr.
Zinn, Ralph Howard	Morgantown	Fr., A. B.
Zirkle, Burman B.	Brown	Fr., A. B.

ENROLLED IN THE SCHOOLS.

Aharrah, Bess	Thomas	Summer School
Ammons, Stephen Cecil	Fairview	Summer School
Anderson, Frank	Morgantown	Sum. Sch. Min.
Anderson, Virginia	Morgantown	Music
Anderson, Wilburt E.	Cameron	Summer School
Appleby, Gordon Linford	Clarksburg	Summer School
Arnett, Besse Dey	Buckhannon	Summer School
Arnold, Denver	Skelton	Sum. Sch. Min.
Ash, Samantha June Baker	Ashley	Summer School
Ashburn, Edith May	Pine Grove	Summer School
Atkinson, Frances Leonard	While Sulphur Spr.	Summer School
Atkinson, Jake	Jenkinjones	Sum. Sch. Min.
Augustine, Mary Edith	Confluence, Pa.	Summer School
Baer, Robert Ely	Morgantown	Summer School
Bailey, Eva	Weston	Summer School
Bailey, Jessie Lee	Morgantown	Night Class
Baker, Charlotte Blair	Morgantown	Music
Baker, Loisbelle	Morgantown	Music
Ballard, Helen Houston	Greenville	Music
Barker, Dolly Naomi	Hastings	Summer School
Barnard, Willard Rachel	Rowlesburg	Music
Barrick, George M.	Kimball	Sum. Sch. Min.
Beall, Loretta Mildred	Morgantown	Music
Beard, Bertie McQuade	Arbovale	Summer School
Beard, Lillian Cameron	Arbovale	Summer School
Beatty, Bertha Mae	Collier	Summer School
Beckett, Earnest Clyde	Morgantown	Music
Bennett, T. E.	Flemington	Sum. Sch. Min.
Bevington, Isabelle Ablerta	Morgantown	Music
Bills, Mary Eunice	St. Marys	Summer School
Bobbitt, Lillian Pearl	Cowen	Summer School
Bobbitt, Mabel Hildred	Cowen	Summer School
Bobo, W. S.	Tunnelton	Sum. Sch. Min.
Bogert, R. K.	Galloway	Sum. Sch. Min.
Bonar, May	Glen Easton	Summer School
Boone, R. L.	Jenkinjones	Sum. Sch. Min.
Booth, Hobart	Williamson	Sum. Sch. Min.
Bosley, Herbert Kight	Davis	Summer School
Bracey, Eliza Cathrine	Morgantown	Summer School
Bragg, C. E.	Minden	Sum. Sch. Min.
Brake, Claude Andrew	Buckhannon	Summer School
Bramlett, James Mitchell	Glenville	Summer School
Brand, Olive Ross	Salem	Summer School
Brand, Richard	Morgantown	Music
Brininstool, Ruth Marian	Clarksburg	Summer School
Brogan, P. C.	Big Sandy	Sum. Sch. Min.
Brown, Frances Leighton	Tunkhannock, Pa.	Music
Brown, Joseph	Mona	Sum. Sch. Min.
Brown, John Guy	Morgantown	Summer School
Brown, Margaret Mae	Charleston	Summer School
Brown, Mary Frances	Morgantown	Music
Brown, Mary Virginia	Morgantown	Summer School
Brown, Mary Virginia	Morgantown	Music

Brunk, J. G.	Pax	Sum. Sch. Min.
Bryce, William F.	Sun	Sum. Sch. Min.
Burgess, Albert Newton	Old Fields	Summer School
Burgess, Marjorie	Wayne	Summer School
Burgess, Tony Marvin	Morgantown	Sum. Sch. Min.
Bush, Mary Hope	Cox's Mills	Night Class
Buss, Minnie	Wheeling	Summer School
Cain, Lessie Byrl	Ellenboro	Summer School
Cameron, Margaret Tate	Mace	Summer School
Campbell, Charles Leonard	Holliday's Cove	Summer School
Cannaday, Mary Foster	Morgantown	Summer School
Cannon, M. Slytice	Clarksburg	Summer School
Cantrall, Anne Wood	Morgantown	Summer School
Cantrall, Charlotte Wood	Morgantown	Music
Carroll, E. F.	Morgantown	Sum. Sch. Min.
Carroll, Myra Louise	Masontown	Music
Cather, Maude Minshall	Morgantown	Music
Cavendish, Hugh Edwin	Ramsey	Summer School
Chadwell, Cade	Pursglove	Sum. Sch. Min.
Chaplin, Virginia Elizabeth	Morgantown	Music
Chapman, John	Morgantown	Night Class
Charter, Florence	West Union	Summer School
Chiule, Constantine	Morgantown	Music
Christian, J. H.	Carlisle	Sum. Sch. Min.
Christian, William	War	Sum. Sch. Min.
Clancy, Elizabeth Johnson	Mannington	Summer School
Clark, Mildred Cynthia	Kyle	Summer School
Cobb, John	Minden	Sum. Sch. Min.
Coffey, Isabelle Christine	Charleston	Summer School
Coffman, Eva	Hagerstown, Md.	Summer School
Cokeley, Mae Pauline	Waverly	Summer School
Cole, Alice Marie	Grafton	Summer School
Cole, Samuel J.	Blaine	Sum. Sch. Min.
Collins, George	Mona	Sum. Sch. Min.
Compton, George	Montcoal	Sum. Sch. Min.
Conley, Pauline Ruth	Richwood	Summer School
Connelly, Etta May	Mannington	Summer School
Conner, Lena	Wheeling	Summer School
Conway, Edith Virginia	Wheeling	Summer School
Cook, Edna Ila	Newburg	Summer School
Cooper, Hisel Florence	Harman	Summer School
Cooper, Myrtle	Harman	Summer School
Cooper, Samson Sherdon	Harman	Summer School
Cope, Walter A.	Bluefield	Summer School
Copenhaver, Willoughby Marie	Wallace	Summer School
Cormany, Ingaba	Morgantown	Summer School
Cornwell, Edna May	Moatsville	Summer School
Correll, May Agnes	Philippi	Summer School
Courtney, Alice Roosevelt	Morgantown	Music
Courtney, Clara Cahart	Morgantown	Music
Courtney, Wilma Marie	Morgantown	Music
Cox, Maude Lillian	Elkins	Summer School
Crickenberger, Hattie	Grafton	Summer School
Criswell, Evan	Morgantown	Sum. Sch. Min.
Crockett, Earl	Youkon	Sum. Sch. Min.

Crowe, Flora Katharine	Cumberland, Md.	Summer School
Culp, Ira	Shinnston	Sum. Sch. Min.
Cupp, Ira Milroy	Terra Alta	Summer School
Curtis, Rhoda Carr	Morgantown	Summer School
Cusick, Hazel Gertrude	Wellsburg	Summer School
Dailey, Donovan David	Flemington	Summer School
Danks, Vashti Lee	Independence	Summer School
Darnell, George	Morgantown	Sum. Sch. Min.
Davis, John Andrew Gardner, Jr	Greenwood, Va.	Summer School
Davis, Willey Maud	Charleston	Summer School
Davisson, Gertrude	Harrisville	Music
Dean, Isabel Florence	Fairmont	Summer School
Deaner, J. C.	Morgantown	Sum. Sch. Min.
DeGant, Stella Cecelia	Wheeling	Summer School
DeLung, Elida Mae	Fenwick	Summer School
DeLynn, Ann Ida	Morgantown	Music
Dent, Roy O.	Mona	Sum. Sch. Min.
DeWitt, Dorotha Gertrude	Wellsburg	Summer School
De Witt, Ruth Mae	Wellsburg	Summer School
Dick, Florence Emma	Charleston	Summer School
Dieckhoff, Resa Louise Christine	Wheeling	Summer School
Dille, Lucie Beltzhoover	Morgantown	Music
Dobbins, Zela Dotson	Richwood	Summer School
Dobrowelsky, Peter	Wellsburg	Sum. Sch. Min.
Dodge, Edna Lauretta	Terra Alta	Music
Donham, Beulah Hope	Morgantown	Music
Donovan, Ilene	New Cumberland	Summer School
Dorr, Birdie Louise	Morgantown	Music
Daugan, Lucy Donley	Morgantown	Music
Dougherty, Doris Lucile	Ronceverte	Summer School
Doughty, Lucile Buchanan	Ronceverte	Summer School
Douglass, Lottie	Smithton	Night Class
Duchateau, Fernand	Morgantown	Music
Duffield, Flora Moore	Charleston	Summer School
Dulsko, A. R.	Hall	Sum. Sch. Min.
Dunbar, Mary Hedrick	Spring Creek	Summer School
Dusenberry, Donald Joseph	Morgantown	Music
Earp, Ada Richmond	Wheeling	Summer School
Earp, Effie Ellsler	Wheeling	Summer School
Easley, Andrew Woolwine	Bluefield	Summer School
Eisaman, Grace	Kingwood	Music
Eliason, Harold	Rowlesburg	Summer School
Emerson, Howard Ulyses	Morgantown	Summer School
Emerson, John Francis	Morgantown	Music
Endhoven, Joseph	Moundsville	Sum. Sch. Min.
Endler, Agnes Otilia	Romney	Summer School
Enrico, Gasper	Morgantown	Sum. Sch. Min.
Ervine, Anna Lee	Huntersville	Summer School
Evans, Gayle	Folsom	Summer School
Evans, Lena Mae	Hazelton	Summer School
Evans, Mary	Grafton	Summer School
Evans, Myrtle	Fayette City, Pa.	Summer School

Farley, Laura	Pineville	Summer School
Farr, George	Martins Ferry	Sum. Sch. Min.
Farr, Stanley	Lochgelly	Sum. Sch. Min.
Fauss, Leroy Carl	Williamstown	Summer School
Federer, Ralph West	Morgantown	Music
Feehan, John F.	Morgantown	Sum. Sch. Min.
Feraro, S. J.	Silush	Sum. Sch. Min.
Ferguson, Vernice Alice	Holliday's Cove	Summer School
Ferrell, Josephine Ethel	Sistersville	Summer School
Fette, Edna Elizabeth	Wheeling	Summer School
Field, Gertie	Kingwood	Summer School
Fisher, Claire Beatrice	New York, N. Y.	Music
Fisher, Minnie Pearl	Logan	Summer School
Fitzgerald, Caroline Rutter	Hillcoke, Pa.	Music
Fleming, James H.	Barracksville	Sum. Sch. Min.
Flowers, Mabel Pearl	Folsom	Summer School
Ford, Coline Yvonne	Parsons	Summer School
Forquer, Lucille Ermina	Bruceton Mills	Summer School
Frank, Anna Leona	Fairmont	Music
Freshour, Rose Sellar	Martinsburg	Summer School
Furbee, Artha	Paden City	Summer School
Gaines, Beulah Campbell	Salem	Night Class
Garlow, Lorenza Quertimont	Pt. Marion, Pa.	Music
Garner, Gaynell	New Martinsville	Summer School
Gates, A. R.	Jackson, Ohio	Sum. Sch. Min.
Gates, Cecil Raymond	Morgantown	Night Clas
Gaughan, Sarah Cecelia	Mannington	Summer School
Gayley, Adeline Edith	Richwood	Summer School
Geist, Arline	Spencer	Summer School
George, Goldie Rae	Smithfield, Pa.	Summer School
Gibbons, Teresa	New Martinsville	Summer School
Gibson, Wilma Irene	Glendon	Summer School
Gill, Ola	Lansing	Summer School
Gillespie, Florence Margaret	Moundsville	Summer School
Given, Ida Susan	Sutton	Summer School
Glover, Isabel Hall	Morgantown	Summer School
Golden, Mary Marie	Flatwoods	Summer School
Goodall, Chloe Lee	Charleston	Summer School
Goodman, William	Slagle	Sum. Sch. Min.
Goodrich, Cecile Pearl	Mt. Morris, Pa.	Music
Goodson, Millerd	Leewood	Sum. Sch. Min.
Gorman, Roger	Morgantown	Night Class
Gould, Elsie Mae	Cowen	Summer School
Graff, E. H.	Lochgelly	Sum. Sch. Min.
Greathouse, Mary Genevieve	Sutton	Summer School
Green, Gertrude	Morgantown	Music
Greenwood, Grover Cleveland	Morgantown	Summer School
Gregg, Margaret Virginia	Morgantown	Music
Greisl, Agnes Carolyn	Richwood	Summer School
Griffith, Franklin E.	Farmington	Sum. Sch. Min.
Grimes, Mary Elizabeth	Morgantown	Summer School
Groves, Alva George	Enon	Summer School
Guthrie, George W.	Broomfield	Sum. Sch. Min.
Haas, W. B.	Morgantown	Sum. Sch. Min.
Haigh, Josephine	Uffington	Summer School

Hall, Edna Rita	Frametown	Summer School
Hall, Florence Malinda	Grafton	Night Class
Hall, Floy Nadine	Pennsboro	Music
Hall, Fonda Valera	Morgantown	Music
Hall, Janet Ramsey	Smithfield, Pa.	Summer School
Hall, Nelle Herod	Morgantown	Music
Hall, Opal Lucile	Morgantown	Music
Halley, Gladys	Wellsburg	Summer School
Hamilton, Anna Isabelle	Congo	Summer School
Hamilton, Kathryn Lee	Morgantown	Music
Hamilton, Mary	VanVoorhis	Summer School
Hankins, Mildred May	Moundsville	Summer School
Hannah, Vesta Clio	Morgantown	Summer School
Harkness, Imogene Mary	Morgantown	Music
Harris, Goldie	Buckhannon	Summer School
Hartigan, Marie Gemas	Morgantown	Music
Haught, Nellie Hazel	Burton	Music
Hawse, Edgar Anderson	Baker	Summer School
Hayden, Clara Fay	Harrisville	Summer School
Hayes, Margaret Ruth	Morgantown	Music
Hecker, Norma Marian	Fairmont	Music
Heermans, Florence Elliott	Morgantown	Music
Helman, Robert Joseph	Cumberland, Md.	Music
Helmbright, Mary Katherine	Wheeling	Summer School
Hensell, Alouise	Morgantown	Music
Hensell, Mary Josephine	Morgantown	Music
Hildreth, James Judson	Triplett	Summer School
Hill, Gladys Stacy	Wick	Summer School
Hillard, Ruth Erma	Morgantown	Music
Hindley, Dorothy	E. Liverpool, O.	Summer School
Hockman, Marvin Stanley	Slanesville	Summer School
Holton, Thomas Marvel	Huntington	Summer School
Honecker, Annie	Wheeling	Summer School
Hoover, A. C.	Luke, Md.	Sum. Sch. Min.
Hopper, Eleanor Letcher	Charleston	Summer School
Horchler, A. L.	Newburg	Sum. Sch. Min.
Householder, Wilma	New Cumberland	Summer School
Houston, Clara Ruth	Morgantown	Music
Howard, Cora Elizabeth	Hundred	Summer School
Hudgin, Sara Graham	Romney	Summer School
Huffman, Florence Edna	Alderson	Summer School
Hughart, Minnie Lee	Scorbro	Summer School
Hunt, George Ray	Littleton	Summer School
Hunter, Anna Brand	Moundsville	Summer School
Hutchinson, Blanche Cook	Welch	Summer School
Hutson, Luie	Blaine	Sum. Sch. Min.
Hylton, Clyde E.	War	Sum. Sch. Min.
Ice, Milla Dorothy	Barrackville	Summer School
Ingram, Hulda Idella	Funkstown, Md.	Summer School
Irish, G. S.	Follansbee	Sum. Sch. Min.
Jacobs, Grace Baldwin	Morgantown	Summer School
Jamison, Clona Maxine	Morgantown	Music
Jarrett, Mary Evelyn	Charleston	Summer School
Jenkins, Florence Elizabeth	Morgantown	Music

Jenkins, Nellie Byron	Morgantown	Music
Johnson, Grace Mae	Friendsville, Md.	Summer School
Johnson, Lavinia Grace	Richwood	Summer School
Johnston, Helen	Huntington	Music
Jones, Hallie Barr	Morgantown	Summer School
Judy, William Denver	Newburg	Summer School
Kaplan, Sadie	Morgantown	Music
Kean, Helen Elizabeth	Cumberland, Md.	Music
Kearns, Mary	Rowlesburg	Summer School
Keck, Mae Rettstatt	S. Brownsville, Pa.	Music
Keenan, Gladys Elaine	Richwood	Summer School
Kelbaugh, Norma Estella	Sandyville	Summer School
Kelley, Sue	St. Marys	Summer School
Kelso, Rachel Beulah	Cumberland, Md.	Summer School
Kerfort, Mary Weldon	Shawnee, Okla.	Summer School
Keer, Thorne McVeigh	Dunmore	Summer School
Keys, Florence Rebecca	Morgantown	Night Class
Keyser, Eva Margaret	Beckley	Summer School
King, Ruby Mae	Spencer	Summer School
King, Winona	Ripley	Music
Kiser, Thomas Elijah	Spencer	Summer School
Kizinski, Joseph William	Star City	Summer School
Kneisel, Florence Marie	Fairmont	Summer School
Knisley, Pearle	Blacksville	Summer School
Lake, Margaret Louise	Lake Charles, La.	Summer School
Lambert, E. F.	Grafton	Sum. Sch. Min.
Lambert, R. B.	Grafton	Sum. Sch. Min.
Lane, Marie Regina	Wheeling	Summer School
Lanham, George Baxter	Scarbro	Summer School
Lasley, James Mecum	Walnut Cove, N. C.	Summer School
Laughlin, Edna Belle	Adamston	Summer School
Lazzell, Mary Laura	Van Voorhis	Music
Lee, Helen Boardman	Morgantown	Music
Lee, Raymond Clarence	Middlebourne	Summer School
Lester, Verna Leodah	Morgantown	Music
Little, Boyd	Crab Orchard	Sum. Sch. Min.
Lohman, Charles	Summerlee	Sum. Sch. Min.
Lohr, Olive Nay	Moundsville	Summer School
Long, Irene Charlotte	New Cumberland	Summer School
Longridge, Mary Margaret	Barton, Md.	Summer School
Longridge, Rex	Barton, Md.	Sum. Sch. Min.
Lowe, Lola	Charleston	Summer School
Loy, Preston Alonzo	Kirby	Summer School
Ludwig, George Philip	Rio	Summer School
Lynch, Winifred Virginia	Clarksburg	Music
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Smith, Margaret Elizabeth	Morgantown	Music
Smith, Marguerite Elizabeth	Morgantown	Music
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Southern, W. E.	Winding Gulf	Sum. Sch. Min.
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Sturm, Clarence L.	Four States	Sum. Sch. Min.
Sullivan, Chattie Moore	Louisa, Ky.	Summer School
Sutherland, R. C.	Century	Sum. Sch. Min.
Talbot, Ruby	Philippi	Summer School
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Talbott, J. D.	Fairmont	Sum. Sch. Min.
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Templeton, Katherine Anne	Cumberland, Md.	Summer School
Terry, Maurice	Yukon	Sum. Sch. Min.
Terwilliger, John C.	Morgantown	Sum. Sch. Min.
Thomas, C. S.	Mt. Hope	Sum. Sch. Min.
Thomas, Jess	Wickham	Sum. Sch. Min.
Thomas, Pearl	Grafton	Summer School
Thomas, Trevor Roosevelt	Monessen, Pa.	Summer School
Thompkins, Roger W.	Cedar Grove	Sum. Sch. Min.
Thompson, Georgiana	Purgitsville	Summer School
Thompson, Mary Kathryn	Holliday's Cove	Summer School
Thompson, Sara Alzina	Wellsburg	Summer School
Thurber, Ethel Milroy	Wheeling	Summer School
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Turley, C. B.	Boomer	Sum. Sch. Min.
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Turner, Henry	Tams	Sum. Sch. Min.
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Turner, Roy Woodford	Hardman	Summer School
Twiggs, Myrtle Grace	Ravenswood	Summer School
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Wain, Hilda May	E. Liverpool, O.	Summer School
Walker, Beatrice Ashley	Baltimore, Md.	Summer School
Walker, Robert Henry	Gordonsville, Va.	Summer School
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Watkins, Herman	Winding Gulf	Sum. Sch. Min.
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White, James Andrew	Richwood	Summer School
White, Kathern Mason	Webster Springs	Music
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Williams, E. D.	Clarksburg	Sum. Sch. Min.
Williams, Edythe Margaret	Reedsville	Summer School
Williams, Elizabeth Evans	Clarksburg	Summer School
Williams, Franklin Keeler	Mapletown, Pa.	Summer School
Williams, Harriett	Morgantown	Music
Williams, Lela Agnes	Richwood	Summer School
Williams, Mary Margaret	Morgantown	Music
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Williamson, Mabel Mae	Friendly	Summer School
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Wilson, Ada Eleanore	Harrisville	Summer School
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Y. M. C. A., 44.
Y. W. C. A., 44.
Zoology, 25, 57, 140.

SUMMARY OF UNIVERSITY ENROLLMENT FOR 1921-1922.

I. Enrolled as Candidates for Degrees:

	Graduate			Senior			Junior			Sophomore			Freshman			Total			Special			Total		
	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total
Arts and Sciences	24	23	47	48	54	102	68	75	143	132	107	239	301	185	486	573	444	1017	6	5	11	579	449	1028
Engineering	6	0	6	33	0	33	55	0	55	105	0	105	202	0	202	401	0	401	7	0	7	408	0	408
Agriculture	12	0	12	26	15	41	39	23	62	33	33	66	32	42	74	142	113	255	65	1	66	207	114	321
Law				17	1	18	22	0	22	26	1	27				65	2	67	6	0	6	71	2	73
Medicine				44	1	45	59	1	60							103	2	105	1	0	1	104	2	106
Pharmacy							1	0	1	11	1	12	18	3	21	30	4	34	4	0	4	34	4	38
Totals	42	23	65	168	71	239	244	99	343	307	142	449	553	230	783	1314	565	1879	89	6	95	1403	571	1974

II. Enrolled in Other Departments at Morgantown:

	Men	Women	Total
School of Music	11	117	128
Summer School (not counted elsewhere)	72	291	363
Night Classes	5	11	16
Summer School of Mining	106	00	106
Farmers' Week	380	133	513
Boys' and Girls' Prize Winners Course (1921)	202	202	404
School of Good Roads (Not held)			
Short Course for Machinists	13	00	13
Total Enrollment in Summer School			1047
Enrolled from other States and Countries			227

III. Enrolled in Extension Courses:

In Industrial Education			11
In Mining			850
In College of Arts and Sciences	35	387	422

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1922-1923